

U.S. Department of Homeland Security Region 4 3005 Chamblee Tucker Road Atlanta, GA 30341



September 22, 2022

Mr. Steve McGugan State Hazard Mitigation Officer Assistant Director / Mitigation Section Chief Division of Emergency Management, NC Department of Public Safety 200 Park Offices Drive Durham, NC 27713

Reference: Pee Dee Lumber Regional Hazard Mitigation Plan

Dear Mr. McGugan:

We are pleased to inform you the Pee Dee Lumber Regional Hazard Mitigation Plan update complies with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR §201.6. Effective September 22, 2022, the plan is approved for a period of five (5) years to September 21, 2027.

Enclosed is the status of all participating jurisdictions. Approved jurisdictions are eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Flood Mitigation Assistance (FMA)
- Building Resilient Infrastructure and Communities (BRIC)

Please note that all funding requests will be evaluated individually according to the program's specific eligibility requirements.

The State and all plan participants should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or any plan participant need assistance, please do not hesitate to contact Edwardine Marrone, of my staff, at (404) 433-3968.

Sincerely,

Kristen M. Martinenza, P.E., CFM Branch Chief, Risk Analysis Branch

Kriste M. Matury

FEMA Region 4

Enclosure

Enclosure: Plan Participant Status List

Attached is the list of participating jurisdictions in the referenced hazard mitigation plan.

	Community Name	Jurisdiction Status	Date Approved by FEMA
1)	•		9/22/22
1)	Anson County Ansonville town	Approved APA	9122122
2)			
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4)	Candor town	APA	
5)	Dobbins Heights town	APA	
6)	East Laurinburg town	APA	
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21)	Rockingham city	APA	
	Scotland County	APA	
	Star town	APA	
24)	Troy town	APA	
	Wadesboro town	APA	
	Wagram town	APA	
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November 7, 2022

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management, NC Department of Public Safety
200 Park Offices Drive
Durham, NC 27713

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November 8, 2022

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State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management, NC Department of Public Safety
200 Park Offices Drive
Durham, NC 27713

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U.S. Department of Homeland Security Region 4 3005 Chamblee Tucker Road Atlanta, GA 30341



January 11, 2023

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management, NC Department of Public Safety
200 Park Offices Drive
Durham, NC 27713

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February 22, 2023

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
Division of Emergency Management, NC Department of Public Safety
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March 10, 2023

Mr. Steve McGugan
State Hazard Mitigation Officer
Assistant Director / Mitigation Section Chief
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SECTION 1 INTRODUCTION

This section provides a general introduction to the Pee Dee Lumber Regional Hazard Mitigation Plan. It consists of the following five subsections:

- 1.1 Background
- 1.2 Purpose
- 1.3 Scope
- 1.4 Authority
- ♦ 1.5 Summary of Plan Contents

1.1 BACKGROUND

Natural hazards, such as hurricanes, floods, and tornadoes, are a part of the world around us. Their occurrence is natural and inevitable, and there is little we can do to control their force and intensity. We must consider these hazards to be legitimate and significant threats to human life, safety, and property.

The Pee Dee Lumber Region is located in the south-central part of North Carolina and includes the counties of Anson, Montgomery, Richmond, and Scotland. This area is vulnerable to a wide range of natural hazards such as severe thunderstorms, floods, tornadoes, winter storms, and wildfires. It is also vulnerable to human-caused hazards, including chemical releases and hazardous material spills. These hazards threaten the life and safety of residents in the Pee Dee Lumber Region and have the potential to damage or destroy both public and private property, disrupt the local economy, and impact the overall quality of life of individuals who live, work, and vacation in the Pee Dee Lumber Region.

While the threat from hazardous events may never be fully eliminated, there is much we can do to lessen their potential impact upon our community and our citizens. By minimizing the impact of hazards upon our built environment, we can prevent such events from resulting in disasters. The concept and practice of reducing risks to people and property from known hazards is generally referred to as *hazard mitigation*.



FEMA Definition of Hazard Mitigation:

"Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards."

Hazard mitigation techniques include both structural measures (such as strengthening or protecting buildings and infrastructure from the destructive forces of potential hazards) and non-structural measures (such as the adoption of sound land use policies and the creation of public awareness programs). It is widely accepted that the most effective mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately

made. A comprehensive mitigation approach addresses hazard vulnerabilities that exist today and in the foreseeable future. Therefore, it is essential that projected patterns of future development are evaluated and considered in terms of how that growth will increase or decrease a community's overall hazard vulnerability.

A key component in the formulation of a comprehensive approach to hazard mitigation is to develop, adopt, and update a local hazard mitigation plan as needed. A hazard mitigation plan establishes the broad community vision and guiding principles for reducing hazard risk, and further proposes specific mitigation actions to eliminate or reduce identified vulnerabilities.

The four counties participating in the development of the Pee Dee Lumber Regional Hazard Mitigation Plan first joined together in 2012 to develop the initial version of this plan. The plan was updated in 2017/2018 and this version serves as the second update of the regional plan. The process followed to update the plan in detailed in Section 2: Planning Process.

This regional plan draws from each of the county plans and documents the region's sustained efforts to incorporate hazard mitigation principles and practices into routine government activities and functions. At its core, the Plan recommends specific actions to minimize hazard vulnerability and protect residents from losses to those hazards that pose the greatest risk. These mitigation actions go beyond simply recommending structural solutions to reduce existing vulnerability, such as elevation, retrofitting, and acquisition projects. Local policies on community growth and development, incentives for natural resource protection, and public awareness and outreach activities are examples of other actions considered to reduce the Pee Dee Lumber Region's vulnerability to identified hazards. The Plan remains a living document, with implementation and evaluation procedures established to help achieve meaningful objectives and successful outcomes over time.

1.1.1 The Disaster Mitigation Act and the Flood Insurance Reform Acts

In an effort to reduce the Nation's mounting natural disaster losses, the U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA 2000) in order to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Section 322 of DMA 2000 emphasizes the need for state and local government entities to closely coordinate on mitigation planning activities and makes the development of a hazard mitigation plan a specific eligibility requirement for any local government applying for federal mitigation grant funds. These funds include the Hazard Mitigation Grant Program (HMGP) and the Building Resilient Infrastructure and Communities (BRIC) program, and the Flood Mitigation Assistance (FMA) program, all of which are administered by the Federal Emergency Management Agency (FEMA) under the Department of Homeland Security. Communities with an adopted and federally-approved hazard mitigation plan thereby become pre-positioned and more apt to receive available mitigation funds before and after the next disaster strikes.

Major federal flood insurance legislation was passed in 2012 under the Biggert-Waters Flood Insurance Reform Act (P.L. 112-141) and the subsequent Homeowner Flood Insurance Affordability Act (HFIAA) in 2014 which revised Biggert-Waters. HFIAA established the requirement that a FEMA-approved Hazard Mitigation Plan is now required if communities wish to be eligible for any of the FEMA mitigation programs. These acts made several changes to the way the National Flood Insurance Program is to be run, including raises in rates to reflect true flood risk and changes in how Flood Insurance Rate Map

(FIRM) updates impact policyholders. These acts further emphasize Congress' focus on mitigating vulnerable structures.

The Pee Dee Lumber Regional Hazard Mitigation Plan has been prepared in coordination with FEMA Region IV and North Carolina Emergency Management (NCEM) to ensure that the Plan meets all applicable FEMA and state requirements for hazard mitigation plans. A *Local Mitigation Plan Review Tool*, found in Appendix C, provides a summary of federal and state minimum standards and notes the location where each requirement is met within the Plan.

1.2 PURPOSE

The purpose of the Pee Dee Lumber Regional Hazard Mitigation Plan is to:

- Completely update the existing Pee Dee Lumber Regional Hazard Mitigation Plan to demonstrate progress and reflect current conditions;
- ♦ Update the plan in accordance with Community Rating System (CRS) requirements;
- ♦ Increase public awareness and education;
- Maintain grant eligibility for participating jurisdictions; and
- Maintain compliance with state and federal legislative requirements for local hazard mitigation plans.

1.3 SCOPE

The focus of the Pee Dee Lumber Regional Hazard Mitigation Plan is on those hazards determined to be "high" or "moderate" risks to the Pee Dee Lumber Region, as determined through a detailed hazard risk assessment. Other hazards that pose a "low" or "negligible" risk will continue to be evaluated during future updates to the Plan, but they may not be fully addressed until they are determined to be of high or moderate risk. This enables the participating jurisdictions to prioritize mitigation actions based on those hazards which are understood to present the greatest risk to lives and property.

The geographic scope (i.e., the planning area) for the Plan includes the counties of Anson, Montgomery, Richmond, and Scotland, as well as their incorporated jurisdictions. **Table 1.1** lists the participating areas.

TABLE 1.1: PARTICIPATING JURISDICTIONS IN THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

Anson County			
Ansonville	Lilesville	McFarlan	
Morven	Peachland	Polkton	
Wadesboro			
Montgomery County			
Biscoe	Candor	Mount Gilead	
Star	Troy		
Richmond County			

Dobbins Heights	Ellerbe	Hamlet
Hoffman	Norman	Rockingham
Scotland County		
Gibson	Laurinburg	Wagram

1.4 AUTHORITY

The Pee Dee Lumber Regional Hazard Mitigation Plan has been developed in accordance with current state and federal rules and regulations governing local hazard mitigation plans and has been adopted by each participating county and local jurisdiction in accordance with standard local procedures. Copies of the adoption resolutions for each participating jurisdiction are provided in Appendix A. The Plan shall be routinely monitored and revised to maintain compliance with the following provisions, rules, and 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);
- ♦ FEMA's Final Rule published in the Federal Register at 44 CFR Part 201; (201.6 for local mitigation planning requirements);
- ♦ Flood Insurance Reform Act of 2004 (P.L. 108-264) and Biggert-Waters Flood Insurance Reform Act of 2012 (P.L. 112-141) and the Homeowner Flood Insurance Affordability Act of 2014.

1.5 SUMMARY OF PLAN CONTENTS

The contents of this Plan are designed and organized to be as reader-friendly and functional as possible. While significant background information is included on the processes used and studies completed (i.e., risk assessment, capability assessment), this information is separated from the more meaningful planning outcomes or actions (i.e., mitigation strategy, mitigation action plan).

Section 2, *Planning Process*, provides a complete narrative description of the process used to prepare the Plan. This includes the identification of participants on the planning team and describes how the public and other stakeholders were involved. It also includes a detailed summary for each of the key meetings held, along with any associated outcomes.

The *Community Profile*, located in Section 3, provides a general overview of the Pee Dee Lumber Region, including prevalent geographic, demographic, and economic characteristics. In addition, building characteristics and land use patterns are discussed. This baseline information provides a snapshot of the planning area and helps local officials recognize those social, environmental, and economic factors that ultimately play a role in determining the region's vulnerability to hazards.

The Risk Assessment is presented in three sections: Section 4, *Hazard Identification*; Section 5, *Hazard Profiles*; and Section 6, *Vulnerability Assessment*. Together, these sections serve to identify, analyze, and assess hazards that pose a threat to the Pee Dee Lumber Region. The risk assessment also attempts to define any hazard risks that may uniquely or exclusively affect specific areas of the Pee Dee Lumber Region.

The Risk Assessment begins by identifying hazards that threaten the region. Next, detailed profiles are established for each hazard, building on available historical data from past hazard occurrences, spatial extent, and probability of future occurrence. This section culminates in a hazard risk ranking based on conclusions regarding the frequency of occurrence, spatial extent, and potential impact highlighted in each of the hazard profiles. In the vulnerability assessment, NCEM's Risk Management section's loss in expected damages. In essence, the information generated through the risk assessment serves a critical function in the participating jurisdictions in the Pee Dee Lumber Region seek to determine the most appropriate mitigation actions to pursue and implement — enabling them to prioritize and focus their efforts on those hazards of greatest concern and those structures or planning areas facing the greatest risk(s).

The *Capability Assessment*, found in Section 7, provides a comprehensive examination of the Pee Dee Lumber Region's capacity to implement meaningful mitigation actions and identifies opportunities to increase and enhance that capacity. Specific capabilities addressed in this section include planning and regulatory capability, staff and organizational (administrative) capability, technical capability, fiscal capability, and political capability. Information was obtained through the use of a detailed survey questionnaire and an inventory and analysis of existing plans, ordinances, and relevant documents. The purpose of this assessment is to identify any existing gaps, weaknesses, or conflicts in programs or activities that may hinder mitigation efforts and to identify those activities that should be built upon in establishing a successful and sustainable local hazard mitigation program.

The Community Profile, Risk Assessment, and Capability Assessment collectively serve as a basis for determining the goals for the Pee Dee Lumber Regional Hazard Mitigation Plan, each contributing to the development, adoption, and implementation of a meaningful and manageable Mitigation Strategy that is based on accurate background information.

The *Mitigation Strategy*, found in Section 8, consists of broad goal statements as well as an analysis of hazard mitigation techniques for the Pee Dee Lumber Region to consider in reducing hazard vulnerabilities. The strategy provides the foundation for a detailed *Mitigation Action Plan*, found in Section 9, which links specific mitigation actions for each county department or agency 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 functional, through the identification of immediate and short-term 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 Pee Dee Lumber Region less vulnerable to the damaging forces of hazards 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, where possible, hazard mitigation policies and programs with complimentary community goals related to disaster recovery, housing, economic development, recreational opportunities, transportation improvements, environmental quality, land development, and public health and safety.

Plan Maintenance, found in Section 10, includes the measures that each jurisdiction in the Pee Dee Lumber Region will take to ensure the Plan's continuous long-term implementation. The procedures also

SECTION 1: INTRODUCTION

include the manner in which the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

SECTION 2PLANNING PROCESS

44 CFR Requirement

44 CFR Part 201.6(c)(1): The plan shall include documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process and how the public was involved.

This section describes the planning process undertaken by the stakeholders in the Pee Dee Lumber Region to update the plan in 2022. More detailed information about the planning process used to develop the initial plan and the previous update can be found in those plans which are available from NCEM and participating County Emergency Management Offices.

This section consists of the following eight subsections:

- 2.1 Overview of Hazard Mitigation Planning
- ♦ 2.2 History of Hazard Mitigation Planning in the Pee Dee Lumber Region
- ♦ 2.3 Updating the Plan in 2022
- ♦ 2.4 The Pee Dee Lumber Regional Hazard Mitigation Planning Committee
- 2.5 Community Meetings and Workshops
- ♦ 2.6 Involving the Public
- ♦ 2.7 Involving the Stakeholders
- ♦ 2.8 Documentation of Plan Progress

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 culminates in a hazard mitigation plan that identifies specific mitigation actions, each designed to achieve both short-term planning objectives and a long-term community vision.

To ensure the functionality of a hazard mitigation plan, responsibility is assigned for each proposed mitigation action to a specific individual, department, or agency along with a schedule or target completion date for its implementation (see Section 10: *Plan Maintenance*). Plan maintenance procedures are established for the routine monitoring of implementation progress, as well as the valuation 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 that becomes integrated into the routine local decision-making process. (see Section 10: *Plan Maintenance*).

Communities that participate in hazard mitigation planning have the potential to accomplish many benefits, including:

- saving lives and property,
- saving money,
- speeding up 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 the investments made before a hazard event 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 sooner and with less interruption.

The benefits of mitigation planning go beyond solely reducing hazard vulnerability. Mitigation 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 PEE DEE LUMBER REGION

Prior to the development of the initial *Pee Dee Lumber Regional Hazard Mitigation Plan* in 2013, each of the four counties and jurisdictions participating in this Plan has a previously adopted hazard mitigation plan. The FEMA approval dates for each of these plans, along with a list of the participating municipalities for each plan, are listed below:

- Anson County Multi-Jurisdictional Hazard Mitigation Plan (February 2012)
 - Town of Ansonville
 - Town of Lilesville
 - Town of McFarlan
 - Town of Morven
 - Town of Peachland
 - Town of Polkton
 - Town of Wadesboro
- Montgomery County Multi-jurisdictional Hazard Mitigation Plan (November 2004)
 - Town of Biscoe
 - Town of Candor
 - Town of Mount Gilead
 - Town of Star

- Town of Trov
- Richmond County Multi-Jurisdictional Natural Disaster Mitigation Plan (July 2005)
 - Town of Ellerbe
 - City of Hamlet
 - Town of Hoffman
 - Town of Norman
- City of Rockingham Hazard Mitigation Plan (February 2010)
- Scotland County Multi-Jurisdictional Hazard Mitigation Plan (October 2005)
 - Town of East Laurinburg
 - Town of Gibson
 - City of Laurinburg
 - Town of Wagram

Each of these plans was developed using the multi-jurisdictional planning process recommended by the Federal Emergency Management Agency (FEMA), except for the City of Rockingham Plan which was developed for a single jurisdiction.

For the development of the regional plan in 2013, all of the aforementioned jurisdictions have joined to form a regional plan. The process of merging all of the above plans into this regional plan is described in more detail below.

2.3 UPDATING THE PLAN IN 2022

FEMA requires that hazard mitigation plans be updated every five years to remain eligible for federal mitigation and public assistance funding. To prepare the 2022 *Pee Dee Lumber Regional Hazard Mitigation Plan*, ESP Associates, Inc. were hired by North Carolina Emergency Management to provide professional mitigation planning services. Per the contractual scope of work, the consultant team followed the mitigation planning process recommended by FEMA (Publication Series 386 and Local Hazard Mitigation Plan Review Guide) and recommendations provided by North Carolina Division of Emergency Management (NCEM) mitigation planning staff¹. Additionally, for the 2020 update, FEMA Community Rating System (CRS) and Community Wildfire Protection Plan (CWPP) requirements were integrated into the plan update.

Tables 2.1 and 2.2 below provide an overview of how the Community Rating System and Wildfire Protection Plan requirements were integrated into this plan update.

TABLE 2.1 FEMA HAZARD MITIGATION PLANNING REQUIREMENTS AND THE CRS 10-STEP PLANNING PROCESS REFERENCE TABLE

FEMA Disaster Mitigation Act Requirement	CRS Activity 510 Planning Requirement
Phase I – Planning Process	
§201.6(c)(1)	Step 1: Organize to Prepare the Plan
§201.6(b)(1)	Step 2: Involve the Public
§201.6(b)(2) & (3)	Step 3: Coordinate

¹ A copy of the negotiated contractual scope of work between the participating counties and Atkins is available through Richmond County upon request.

FEMA Disaster Mitigation Act Requirement	CRS Activity 510 Planning Requirement		
Phase II – Risk Assessment			
§201.6(c)(2)(i)	Step 4: Assess the Hazard		
§201.6(c)(2)(ii) & (iii)	Step 5: Assess the Problem		
Phase III – Mitigation Strategy			
§201.6(c)(3)(i)	Step 6: Set Goals		
§201.6(c)(3)(ii)	Step 7: Review Possible Activities		
§201.6(c)(3)(iii)	Step 8: Draft an Action Plan		
Phase IV – Plan Maintenance			
§201.6(c)(5)	Step 9: Adopt the Plan		
§201.6(c)(4)	Step 10: Implement, Evaluate and Revise the Plan		

TABLE 2.2 COMMUNITY WILDFIRE PROTECTION PLAN PROCESS INTEGRATION REFERENCE TABLE

CWPP Process	Hazard Mitigation Plan Integration Reference
Step 1: Convene Decisionmakers	Section 2: Planning Process
Step 2: Involve Federal Agencies	Section 2: Planning Process
Step 3: Engage Interested Parties	Section 2: Planning Process
Step 4: Establish a Community Base Map	Section 3: Community Profile
Step 5: Develop a Community Risk Assessment	Sections 4, 5 and 6: Hazard Identification, Hazard Profiles and Vulnerability Assessment Section 7: Capability Assessment
Step 6: Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability	Section 8: Mitigation Strategy
Step 7: Develop an Action Plan and Assessment Strategy	Section 9: Mitigation Action Plans Section 10: Plan Maintenance
Step 8: Finalize the CWPP	Appendix A: Plan Adoption

Source: Preparing a Community Wildfire Protection Plan - A Handbook for Wildland-Urban Interface Communities

The Local Mitigation Plan Review Tool, found in Appendix C, 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 Final Rule as published in the Federal Register in Part 201 of the Code of Federal Regulations (CFR). The planning team used FEMA's Local Mitigation Plan Review Guide (released October 1, 2011) for reference as they completed the Plan.

For the 2022 update of the regional plan, all of the jurisdictions that participated in previous planning efforts have participated in the development of this regional plan except for the Town of East Laurinburg who lost their charter as a town in 2022.

The process used to prepare this Plan included twelve major steps that were completed over the course of approximately eight months beginning in July 2022. Each of these planning steps (illustrated in **Figure 2.1**) resulted in critical work products and outcomes that collectively make up the Plan. Specific plan sections are further described in Section 1: *Introduction*.



FIGURE 2.1: MITIGATION PLANNING PROCESS FOR THE PEE DEE LUMBER REGION

2.4 THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLANNING COMMITTEE

In order to guide the development of this Plan, the Pee Dee Lumber counties (Anson County, Montgomery County, Richmond County, and Scotland County) created the Pee Dee Lumber Regional Hazard Mitigation Planning Committee. The Regional Hazard Mitigation Planning Committee represents 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 July 2022, the Regional Hazard Mitigation 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 e-mail distribution list.

Specifically, the tasks assigned to the Regional Hazard Mitigation Planning Committee members included:

- participate in Regional Hazard Mitigation Planning Committee meetings and workshops
- provide best available data as required for the risk assessment portion of the Plan

- help review the local Capability Assessment section of the plan and provide copies of any mitigation or hazard-related documents for review and incorporation into the Plan
- support the development and update of the Mitigation Strategy, including the design and adoption of regional goal statements
- help design and propose appropriate mitigation actions for their department/agency for incorporation into the Mitigation Action Plan
- review and provide timely comments on all study findings and draft plan deliverables
- support the adoption of the 2022 *Pee Dee Lumber Regional Hazard Mitigation Plan*

Table 2.3 lists the members of the Regional Hazard Mitigation Planning Committee who were responsible for participating in the development of the Plan.

TABLE 2.3: MEMBERS OF THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLANNING COMMITTEE

NAME	DEPARTMENT / AGENCY
Diggs, Rodney	Anson County EM
Smith, Robbie	Montgomery County EM
Smith, Bob	Richmond County EM
Watkins, Benjamin	NCEM Area Coordinator
Baker, Carl	NCEM Hazard Mitigation
Mello, John	NCEM Hazard Mitigation
Sampson, Robert	Scotland County EM
Lewis, Jennifer	NCEM
Crew, Chris	NCEM Hazard Mitigation Plans Manager

Table 2.4 lists points of contact for several of the jurisdiction who elected to designate their respective county officials to represent their jurisdiction on the planning team, generally because they did not have the time or staff to be able to attend on their own. Although these members designated county officials to represent them at in-person meetings, each was still contacted throughout the planning process and participated by providing suggestions and comments on the Plan, updates to mitigation actions and the Capability Assessment via email and phone conversations. These members are listed below by municipality.

TABLE 2.4: MEMBERS DESIGNATING REPRESENTATIVES TO THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLANNING COMMITTEE

NAME	DEPARTMENT / AGENCY	
Anson County		
Estridge, Joe	Mayor, Ansonville	
Bennett, Bernice	Mayor, Lilesville	
Timmons, Diane	Mayor, McFarlan	
Watkins, Timmy	Mayor, Morven	
Allen, Richard	Mayor, Peachland	
Williams, Cynthia	Mayor, Polkton	
Thacker, Bill	Mayor, Wadesboro	
Montgomery County		
Reynolds, William	Mayor, Biscoe	

Hearne, Robert	Mayor, Candor	
Harris, Beverly	Mayor, Mount Gilead	
O'Brien, Mary	Mayor, Star	
Jones, Michael	Mayor, Troy	
Richmond County		
Blue, Antonio	Mayor, Dobbins Heights	
Capel, Brenda	Mayor, Ellerbe	
Bayless, William	Mayor, Hamlet	
Hart, Tommy	Mayor, Hoffman	
Collins, Tonia	Mayor, Norman	
Hutchinson, John	Mayor, Rockingham	
Scotland County		
Arrigon, Gwen	Mayor, Gibson	
Willis, James	Mayor, Laurinburg	
Purcell, George	Mayor, Wagram	

Additional participation and input from other identified stakeholders and the general public was sought by the participating counties during the planning process through phone calls and the distribution of emails, advertisements, and public notices aimed at informing people on the status of the Hazard Mitigation Plan (public and stakeholder involvement is further discussed later in this section).

2.4.1 Multi-Jurisdictional Participation

The Pee Dee Lumber Regional Multi-Jurisdictional Hazard Mitigation Plan includes four counties and twenty-one incorporated municipalities. To satisfy multi-jurisdictional participation requirements, each county and its participating jurisdictions were required to perform the following tasks:

- Participate in mitigation planning workshops;
- Identify completed mitigation actions, if applicable, and identify any new mitigation actions to be included in the plan; and
- Develop and adopt (or update) their local Mitigation Action Plan.

Each jurisdiction participated in the planning process and has developed a local Mitigation Action Plan unique to their jurisdiction. Each jurisdiction will adopt their Mitigation Action Plan separately. This provides the means for jurisdictions to monitor and update their Plan on a regular basis.

2.5 COMMUNITY MEETINGS 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 community workshops held during the development of the plan update². In many cases, routine discussions and additional meetings were held by local staff to accomplish planning tasks specific to their department or agency, such as the approval of specific mitigation actions for their department or agency to undertake and include in the Mitigation Action Plan.

2.5.1: Meeting Minutes

Meeting Minutes from Kickoff Microsoft Teams Meeting July 8, 2021 10:00 – 11:00 AM

On July 8, 2021, Nathan Slaughter, Hazard Mitigation Department Manager from ESP Associates, Inc. and Project Manager for the update of the Pee Dee Lumber Regional Hazard Mitigation Plan conducted a conference call/Teams meeting with the Pee Dee Lumber stakeholders. Mr. Slaughter began by having attendees introduce themselves. The 11 attendees included representatives from various departments and local jurisdictions within each of the four counties participating in the plan update. All four counties were represented. Mr. Slaughter then provided an overview of the items to be discussed at the meeting and briefly reviewed the agenda and presentation slide handouts. He then defined mitigation and gave a review of the Disaster Mitigation Act of 2000 and NC Senate Bill 300.

To continue, Mr. Slaughter provided detailed information about the project. He mentioned that the project is funded by a FEMA HMGP grant, and that NCEM was managing the planning effort and had assigned ESP Associates, Inc. to manage the update, thus ensuring that Mr. Slaughter would remain the Project Manager, as he was for the first two versions of the regional plan. For this update, there was no local funding required.

Mr. Slaughter then explained some of the basic concepts of mitigation. He explained how we should think about mitigation: we want to mitigate hazard impacts of existing development in the community (houses, businesses, critical facilities, etc.), and ensure that future development is conducted in a way that doesn't increase vulnerability. This can be achieved by having good plans, policies, and procedures in place.

Mr. Slaughter then reviewed the key objectives of the project, which are to:

- Coordinate between the four participating counties to update the regional plan
- Update the plan to demonstrate progress and reflect current conditions
- Complete the update before the existing plan expires on March 22, 2023
- Increase public awareness and education
- Maintain grant eligibility for participating jurisdictions
- Update the plan in accordance with Community Rating System (CRS) requirements where applicable, and
- Maintain compliance with State and Federal requirements

² Copies of agendas, sign-in sheets, minutes, and handout materials for all meetings and workshops can be found in Appendix D.

Next, he explained new elements to this update, which include integrating with NCEM's RMT, Activity 510 compliance for CRS communities, Risk MAP, Community Wildfire Protection Plans, the NC Resilience Assessment, and EMAP compliance.

Mr. Slaughter reviewed the list of participating jurisdictions with the group, which all agreed to participate again. He also explained the planning process and specific tasks to be accomplished for the project, which include the planning process, risk assessment, capability assessment, mitigation strategy, mitigation action plan, and plain maintenance procedures. For the risk assessment portion of the process, Mr. Slaughter asked each county to designate a point of contact to coordinate the gathering of GIS data required for the analysis. He also reviewed the list of identified hazards and the committee agreed to maintain the previous list of hazards for the four counties.

The project schedule was presented and Mr. Slaughter noted that the schedule provided ample time to produce a quality plan and meet state and federal deadlines.

Mr. Slaughter discussed what data would need to be collected to complete the project. This includes GIS Data, Capability Assessment Revisions, a Public Participation Survey, and updates to existing Mitigation Actions.

Mr. Slaughter then reviewed the roles and responsibilities of ESP Associates, Inc, the County leads, and the participating jurisdictions. The presentation concluded with a discussion of the next steps to be taken in the project development. He encouraged meeting participants to distribute the Public Participation Survey. The next meeting was scheduled for some time in later in 2022 to discuss the findings of the risk and capability assessments and to begin updating existing mitigation actions and identify new goals.

Meeting Minutes form Mitigation Strategy Meeting February 10, 2022
Phone Call/Teams Meeting
10:00 am – 11:30 am

Nathan Slaughter, Project Manager from ESP Associates, began the meeting by welcoming the attendees and reviewing the meeting agenda. Mr. Slaughter asked meeting attendees to introduce themselves and gave a refresher on mitigation, why we plan, and the key objectives of the project. He reviewed the participating jurisdictions, project tasks and project schedule. He stated that a draft of the updated Regional Hazard Mitigation Plan would be presented by the end of March 2022.

Mr. Slaughter then presented the findings of the risk assessment. He shared the list of all hazards that are addressed in the regional plan, and reviewed the list of hazards addressed in the North Carolina State Hazard Mitigation Plan. He discussed a couple of caveats for the risk assessment and indicated that best available data was used. While that information is helpful, events are often under-reported, so it is important to keep the end goal in sight. The purpose of the risk assessment was shared: to compare hazards and determine which should be the focus of the mitigation actions. Finally, he mentioned to the stakeholders that it ultimately is their risk assessment, so their recommendations for adjustment are welcomed and encouraged.

Mr. Slaughter stated that since the last plan was updated, there have been six Presidential disaster declarations that have impacted the region, which helped emphasize the need to continue updating the mitigation plan.

The following Hazard Profiles and summaries of each hazard were then shared:

- DROUGHT: There were 7 regional drought events between 2000 and 2018, and future occurrences are likely.
- HAILSTORM: There have been 183 recorded events since 1969. Future occurrences are likely.
- HURRICANE AND COASTAL STORM: 64 storm tracks have come within 75 miles of the region since 1850. 57 of those were classified as a hurricane or tropical storm. Future occurrences are highly likely.
- LIGHTNING: Since 1996, there have been 7 reported occurrences, which resulted in seven injuries and \$300 hundred in property damage. Future occurrences are highly likely.
- SEVERE THUNDERSTORMS: 530 severe thunderstorm events have been recorded since 1984. These events resulted in 1 death, 2 injuries, and almost \$4.4 million in property damages. Future occurrences are highly likely.
- TORNADOES: There have been 28 recorded events since 1950, causing 36 injuries and \$15 million in property damage. Future occurrences are likely.
- SEVERE WINTER WEATHER: 140 winter weather events since 1993. Future occurrences are highly likely.
- DAM AND LEVEE FAILURE: Of the 176 dams in the region, 29 are considered high hazard dams. Total of 4 dam breaches in the region; 3 in Richmond County and 1 in Scotland County, and future occurrences are unlikely.
- EROSION: Although little information could be obtained on erosion occurrences in the region, erosion was addressed in the previous plan. Future occurrences are possible.
- FLOOD: 84 flood events have occurred since 1950, resulting in over \$36.5 million in property damage and 3 fatalities. There have also been 68 reported NFIP losses since 1970 and approximately \$614 thousand in claims. There are 2 repetitive loss properties, and future occurrences are highly likely.
- EARTHQUAKE: At least 21 earthquakes have occurred in the Pee Dee Lumber region since 1886. Future occurrences are possible.
- LANDSLIDE: Landslide risk in the region is low and there has only one previous occurrence of landslides reported in the region according to the North Carolina Geological Survey. Future occurrences are unlikely.
- HAZARDOUS MATERIALS INCIDENTS: 190 serious HAZMAT events have been reported through the PHMSA. There are 57 TRI Facilities in the region. Future occurrences are possible.
- WILDFIRE: Much of the region is located in a high-risk wildland urban interface area. Future occurrences are likely.
- NUCLEAR EMERGENCY: There is one nuclear facility within 50 miles of the region. No major historical occurrences were found, and future occurrences are unlikely.

In concluding the review of Hazard Profiles, Mr. Slaughter stated if anyone had additional information for the hazard profiles, or disagreed with any of the data presented, they should call or email him with their concerns.

The results of the hazard identification process were used to generate a Priority Risk Index (PRI), which categorizes and prioritizes potential hazards as high, moderate or low risk based on probability, impact, spatial extent, warning time, and duration. The highest PRI was assigned to Severe Winter Weather, followed by Hurricanes and Coastal Hazards and Tornadoes/Thunderstorms.

Mr. Slaughter then displayed maps that presented each county's social vulnerability, as documented by the Center for Disease Control. The maps present how socially vulnerable areas in each county are as compared to the rest of North Carolina. Many indicators were used to determine the social vulnerability, and the factors were grouped into four themes that were based on census-tract levels.

After a brief break, Mr. Slaughter then presented the Capability Assessment Findings. ESP Associates used a scoring system that was used to rank the participating jurisdictions in terms of capability in four major areas (Planning and Regulatory; Administrative and Technical; Fiscal; Political). Important capability indicators include National Flood Insurance Program (NFIP) participation, Building Code Effective Grading Schedule (BCEGS) score, and Community Rating System (CRS) participation.

Mr. Slaughter reviewed the Relevant Plans and Ordinances, Relevant Staff/Personnel Resources, and Relevant Fiscal Resources. All of these categories were used to rate the overall capability of the participating counties and jurisdictions. Most jurisdictions are in the moderate to high range for Planning and Regulatory Capability and in the moderate range for Fiscal Capability. There is variation between the jurisdictions for Administrative and Technical Capability, mainly with respect to availability of planners and grant writers. Based upon the scoring methodology, it was determined that all of the participating jurisdictions have moderate or high capabilities to implement hazard mitigation programs and activities.

Mr. Slaughter then transitioned to the Mitigation Strategy portion of the presentation. Mr. Slaughter gave an overview of the process for updating the Mitigation Strategy and presented the existing mitigation goals for the regional plan. He asked the regional planning committee to review the goals to determine whether or not they still reflect current vulnerabilities and current mitigation priorities. The committee members agreed that the goals should be modified to mention human-caused hazards but otherwise felt that they were still relevant hazard mitigation goals for the region.

Mr. Slaughter then discussed the results of the public participation survey that was posted on several of the participating counties and jurisdictions' websites. As of the meeting date, 115 responses had been received. Based on the preliminary results, respondents felt that severe thunderstorms/high wind, flooding and severe winter storms posed the greatest threats to their neighborhood. Most did not live in a floodplain or have flood insurance, but 70% of all respondents did not know who to contact regarding reducing their risks to hazards.

Mr. Slaughter then indicated that each participating jurisdiction would need to provide a status update for their existing mitigation actions (completed, deleted, or deferred) by March 10, 2022. Mr. Slaughter also discussed the Mitigation Action Worksheets to be completed for any new mitigation actions and requested that all worksheets be returned by March 10, 2022. Mr. Slaughter then presented sample mitigation actions for the committee members to consider to include in their plan update.

Finally, Mr. Slaughter discussed the next steps in the planning process. These included returning mitigation action updates and delivery of a draft plan in late March 2022. He thanked the group for taking the time to attend and the meeting was adjourned.

2.6 INVOLVING THE PUBLIC

44 CFR Requirement

44 CFR Part 201.6(b)(1): The planning process shall include an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval

An important component of the mitigation planning process involves 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 city safer from the potential effects of hazards.

Public involvement in the development of the *Pee Dee Lumber Regional Hazard Mitigation Plan* was sought using two methods: (1) public survey instruments were made available in hard copy and online; and (2) copies of the draft Plan deliverables were made available for public review on county websites and at government offices. The public was provided two opportunities to be involved in the development of the regional plan 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. A public participation survey (discussed in greater detail in Section 2.6.1) was made available during the planning process at various locations throughout the Pee Dee Lumber counties and on county websites.

Each of the participating jurisdictions will hold public meetings before the final plan is officially adopted by the local governing bodies. These meetings will occur at different times once FEMA has granted conditional approval of the Plan. Adoption resolutions will be included in Appendix A.

2.6.1 Public Participation Survey

The Pee Dee Lumber Region was successful in getting citizens to provide input to the mitigation planning process through the use of the *Public Participation Survey*. The *Public Participation Survey* was designed to capture data and information from residents of the Pee Dee Lumber Region that might not be able to attend public meetings or participate through other means in the mitigation planning process.

Copies of the *Public Participation Survey* were distributed to the Regional Hazard Mitigation Planning Committee to be made available for residents to complete at local public offices. A link to an electronic version of the survey was also posted on each county's website. Richmond County made the link to the survey available on their cable access channel as well.

A total of 121 survey responses were received, which provided valuable input for the Regional Hazard

Mitigation Planning Committee to consider in the development of the plan update. Selected survey results are presented below.

- Approximately 51 percent of survey respondents had been impacted by a disaster, mainly hurricanes (Hugo—1989, Florence—2018), winter weather, and tornadoes.
- Respondents ranked Severe Thunderstorm/High Wind as the highest threat to their neighborhood (26 percent), followed by Flooding (15 percent), and Severe Winter/Ice Storm (9 percent).
- Approximately 42 percent of respondents have taken actions to make their homes more resistant to hazards and 69 percent are interested in making their homes more resistant to hazards
- 70 percent of respondents do not know what office to contact regarding reducing their risks to hazards.
- Emergency Services and Public Education were ranked as the most important activities for communities to pursue in reducing risks.

Full results from the public survey can be found by contacting North Carolina Emergency Management's Hazard Mitigation Planning section. A copy of the survey is provided in Appendix B and a detailed summary of the survey results are provided in Appendix D.

2.7 INVOLVING THE STAKEHOLDERS

44 CFR Requirement

44 CFR Part 201.6(b)(1): The planning process shall include an opportunity for neighboring communities, local and regional agencies in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other non-profit interests to be involved in the planning process.

At the beginning of the planning process for the development of this plan, the project consultant worked with each of the four County Emergency Management leads to initiate outreach to stakeholders to be involved in the planning process. The project consultant distributed a list of recommended stakeholders provided from FEMA publication 386-1 titled **Getting Started: Building Support for Mitigation Planning**, which demonstrated the wide range of stakeholders that were considered to participate in the development of this plan. Each of the County Emergency Management leads used that list for reference as they invited stakeholders from their counties to participate in the planning process.

The Regional Hazard Mitigation Planning Committee encouraged more open and widespread participation in the mitigation planning process by making the second committee meeting open to the general public. The region also went above and beyond in its local outreach efforts through the design and distribution of the *Public Participation Survey*. These opportunities were provided for local officials, residents, businesses, academia, and other private interests in the Pee Dee Lumber Region to be involved and offer input throughout the local mitigation planning process.

2.8 DOCUMENTATION OF PLAN PROGRESS

Progress in hazard mitigation planning for the participating jurisdictions in the Pee Dee Lumber 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 late 1990s and

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 Pee Dee Lumber Region. The actions that have been completed are documented in the Mitigation Action Plan found in Section 9.

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 7: *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 Team to update the Plan and by continuing to involve the public in the hazard mitigation planning process.

SECTION 3 COMMUNITY PROFILE

This section of the Plan provides a general overview of the Pee Dee Lumber Region. It consists of the following four subsections:

- 3.1 Geography and the Environment
- ♦ 3.2 Population and Demographics
- 3.3 Housing, Infrastructure and Land Use
- ♦ 3.4 Employment and Industry

3.1 GEOGRAPHY AND THE ENVIRONMENT

The Pee Dee Lumber Region is located along the Piedmont and Inner Coastal Plain border in south-central North Carolina. For the purposes of this plan, the Pee Dee Lumber Region includes Anson, Montgomery, Richmond, and Scotland Counties. An orientation map is provided as **Figure 3.1**.

The Pee Dee Lumber Region is a rural area; however, there are several attractions which draw visitors to the region. These attractions include the Rockingham Speedway, historic towns and sites, and several family-owned vineyards. The Sandhills Game Lands, Pee Dee Wildlife Refuge, and Blewett Falls Reservoir also offer fishing, hunting, camping, hiking, biking, horseback riding, and boating opportunities. Another unique attraction is the Town Creek Indian Mound in Mt. Gilead, which is an archaeological site that has become one of the most popular State Historic Sites in North Carolina.

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

County	Total Land Area
Anson County	531 square miles
Montgomery County	492 square miles
Richmond County	474 square miles
Scotland County	319 square miles

Source: US Census Bureau

The Pee Dee Lumber Region enjoys four distinct seasons with precipitation spread throughout the year. Although there are no distinct wet and dry seasons, overall, summer is the wettest season and autumn is the driest season. Annual precipitation averages between 45 and 50 inches in the region. In the summer, average high temperatures (°F) are in the nineties while average low temperatures are in the mid-sixties. In the winter, average high temperatures reach the mid-fifties while average low

temperatures are near the thirties. On average, snow and sleet events do not occur much more than once or twice a year.

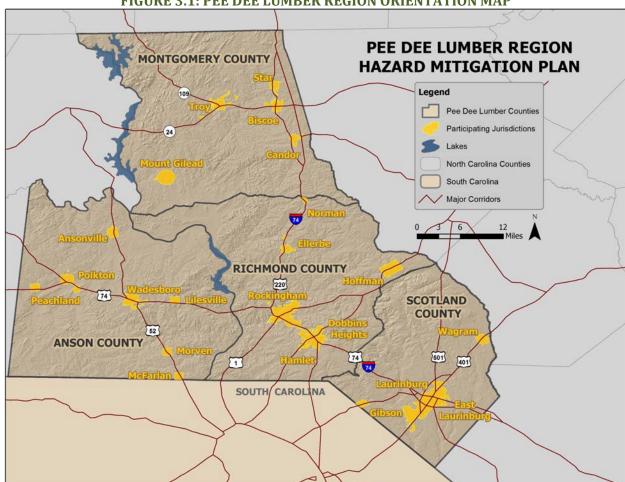


FIGURE 3.1: PEE DEE LUMBER REGION ORIENTATION MAP

3.2 POPULATION AND DEMOGRAPHICS

Anson County is the largest participating county by area, but it has the smallest population making it the least densely populated. Montgomery County also has similar land area and population sizes to Anson County. In contrast, Scotland County and Richmond County are much more densely populated than the other two counties. Between 2010 and 2018, the four counties in the Pee Dee Lumber Region saw negative population growth. There were, however, a few towns and cities that experienced higher rates of growth as well as others that saw higher rates of decline. Population counts from the US Census Bureau for 1990, 2010, and estimates for 2018 for each of the participating jurisdictions are presented in **Table 3.2**.

TABLE 3.2: POPULATION COUNTS FOR PARTICIPATING JURISDICTIONS

			TIMA JONISDICI	
Jurisdiction	1990 Census Population	2010 Census Population	2018 Population Estimate	% Change 2010- 2018
ANSON COUNTY	23,474	25,275	24,877	-1.60%
Town of Ansonville	614	631	587	-7%
City of Lilesville	468	536	489	-8.80%
Town of McFarlan	98	117	109	-6.80%
Town of Morven	590	511	469	-8.20%
Town of Peachland	384	437	405	-7.30%
Town of Polkton	662	3,375	2,925	-13.30%
Town of Wadesboro	3,645	5,813	5,287	-9%
MONTGOMERY COUNTY	23,346	27,798	27,271	-1.90%
Town of Biscoe	1,484	1,700	1,728	1.60%
Town of Candor	748	840	818	-2.60%
Town of Mount Gilead	1,336	1,181	1,148	-2.80%
Town of Star	775	876	848	-3.10%
Town of Troy	3,404	3,189	3,343	4.80%
RICHMOND COUNTY	44,518	46,639	44,887	-3.80%
Town of Dobbins Heights	1,144	866	837	-3.30%
Town of Ellerbe	1,132	1,054	983	-6.70%
City of Hamlet	6,196	6,495	6,340	-2.40%
Town of Hoffman	348	588	565	-3.90%
Town of Norman	105	138	132	-4.30%
City of Rockingham	9,399	9,558	8,776	-8.10%
SCOTLAND COUNTY	33,754	36,157	34,810	-3.70%
Town of East Laurinburg	302	300	279	-7%
Town of Gibson	532	540	502	-7%
City of Laurinburg	11,643	15,962	15,033	-5.80%
Town of Wagram	480	840	777	-7.50%

Source: US Census Bureau

Based on the 2018 Census, the median age of residents of the participating counties ranges from 38 to 40 years. The racial characteristics of the participating counties are presented in **Table 3.3**. In general, whites make up between half to two thirds of each county's population. However, Anson County is the only county to have equal sized white and black populations and Scotland County is the only county to have a sizable American Indian population.

TABLE 3.3: DEMOGRAPHICS OF PARTICIPATING COUNTIES

Jurisdictions	White, Percent (2019)	Black or African American, Percent (2019)	American Indian or Alaska Native, Percent (2019)	Asian, Percent (2019)	Native Hawaiian or Other Pacific Islander, Percent (2019)	Persons of Hispanic Origin, Percent (2019)	Two or More Races, Percent (2019)
Anson County	47.40%	48.50%	0.90%	1.50%	0.10%	4.10%	1.70%
Montgomery County	76.40%	19.00%	1.10%	1.60%	0.10%	15.60%	1.80%
Richmond County	61.30%	31.90%	3.30%	1.10%	20.00%	6.80%	2.30%
Scotland County	44.60%	38.90%	12.80%	0.90%	0.10%	3.30%	2.70%

Source: US Census Bureau

3.3 HOUSING, INFRASTRUCTURE AND LAND USE

3.3.1 Housing

According to the 2018 US Census, there were 64,914 housing units in the Pee Dee Lumber Region, the majority of which are single family homes or mobile homes. Housing information for the four participating counties is presented in **Table 3.4**. As shown in the table, Montgomery County is the only county with a significant percentage of seasonal housing units.

TABLE 3.4: HOUSING CHARACTERISTICS

Jurisdiction	Housing Units (2000)	Housing Units (2018)	Seasonal Units, Percent (2018)	Median Home Value (2013- 2017)
Anson County	10,221	11,628	2.40%	\$83,700
Montgomery County	14,145	16,275	4.20%	\$105,900
Richmond County	19,886	21,707	2.50%	\$80,000
Scotland County	14,693	15,304	1.70%	\$85,200

Source: US Census Bureau

3.3.2 Infrastructure

Transportation

There are two major highways that traverse the Pee Dee Lumber Region. US Route 74 is an east-west highway that runs through Anson, Richmond, and Scotland Counties as it passes through North Carolina from the Tennessee border to the coast. Route 74 connects the towns of Polkton, Wadesboro, Lilesville,

^{*}Hispanics may be of any race, so also are included in applicable race categories

Rockingham, Hamlet, Dobbins Heights, Laurinburg, and East Laurinburg. Interstate 74, once fully complete, will travel southeasterly from the Virginia border and end at US Route 74. This interstate will connect Richmond County to Scotland County. US Route 220, the second major highway, runs north-south across the state from the Virginia border to the Town of Rockingham. This highway connects the towns of Star, Biscoe, Candor, Norman, Ellerbe, and Rockingham. There are also additional highways, including Interstate 109, US Route 1, 52, 401, 501, and NC Highway 24, which travel across the individual counties and into neighboring counties.

There are several small general aviation airports within the Pee Dee Lumber Region, including Anson County Airport in Wadesboro, Montgomery County Airport in Star, Richmond County Airport in Rockingham, and Laurinburg-Maxton Airport in Stewartsville. The major airport located nearest the region is Fayetteville Regional Airport. This airport offers domestic flights on three airlines to Atlanta, Charlotte, and Washington D.C. and is located approximately 50 miles away from the center of the region. Other nearby major airports that offer more widespread domestic flights as well international flights include Charlotte Douglas International Airport, Piedmont Triad International Airport, and Raleigh-Durham International Airport.

Utilities

Electrical Power in the Pee Dee Lumber Region is provided by one public utility and several electricity cooperatives. Progress Energy provides service to all four counties in the region. Pee Dee Electric Membership Corporation also serves all four of the Pee Dee Lumber Region counties. Energy United and Randolph Electric Membership Corporation are two additional cooperatives that provide power to Montgomery County residents.

Water and sewer service is provided by half of participating jurisdictions; however, many areas rely on septic systems and wells. The Counties of Anson, Montgomery, and Richmond; the Cities of Lilesville, Hamlet, Rockingham, and Laurinburg; and the Towns of Wadesboro, Biscoe, Candor, Mt. Gilead, Star, Troy, and Wagram all provide water and sewer service to residents.

Community Facilities

There are a number of public buildings and community facilities located throughout the Pee Dee Lumber Region. According to the data collected for the vulnerability assessment (Section 6.3.3), there are 85 fire stations, 20 police stations, and 55 public schools located within the study area.

Five hospitals are located in the Pee Dee Lumber Region. The largest is Scotland Memorial Hospital, a 154-bed facility located in the City of Laurinburg. The Anson Community Hospital in Wadesboro and the First Health-Richmond Memorial Hospital are two comparably sized facilities with 147 beds and 141 beds, respectively. Two smaller hospitals serving the region include the 64-bed Sandhills Regional Medical Center in the City of Hamlet and the 23-bed First Health-Montgomery Memorial Hospital in the Town of Troy.

The Pee Dee Lumber Region also contains numerous local parks, the Lumber River State Park, the Pee Dee National Wildlife Refuge, and the Uwharrie National Forest. These facilities offer recreational opportunities to area residents and visitors alike.

3.3.3 Land Use

The Pee Dee Lumber Region is a predominately rural area made up of sparse residential development, forestland, and agricultural land. As shown in **Figure 3.1** above, there are numerous small incorporated municipalities located throughout the study area and the majority of residential development and the region's population is clustered around these centers. The incorporated areas are also where many of the local businesses, commercial uses, and institutional uses are located.

While population growth and development in the region remains relatively slow, growth that is occurring is well-managed by the participating jurisdictions. The Capability Assessment found in Section 7 provides an overview of the land use tools that are in place in each jurisdiction. Local land use (and associated regulations) is further discussed in the Capability Assessment as well.

3.4 EMPLOYMENT AND INDUSTRY

Up until the 1960s, the Pee Dee Lumber Region was an agriculture center with an economy largely dependent on the production of cotton and tobacco. Some of the agricultural-driven economy still remains today, and peaches, corn, soybeans, strawberries, truck crops, wheat, poultry, and swine continue to be grown or raised on farms in the region. During the mid-20th century, the economic focus shifted towards manufacturing and textiles, but these industries have seen a drastic decline since the 1990s and significant numbers of job loss have plagued the area. Many towns in the region are now working to bring back small businesses, restore downtown areas, and attract tourists to the area.

According to the North Carolina Department of Commerce Labor and Economic Analysis (NCDCLEA), in 2018, Anson County had a labor force of 10,640 workers. The top 5 employers in Anson County were the Anson County Board of Education, the Department of Public Safety, Anson County, Hornwood INC, and Peoplease Corporation. The average unemployment rate was 3.9 compared to the State rate of 3.7.

In 2018, Montgomery County had an average annual employment of 11,443 workers. According to NCDCLEAD, the top 5 employers in Montgomery County were Montgomery County Education, Grede II LLC, Jordan Lumber and Supply, Klaussner Furniture Industries, and Mcrae Industries. The average unemployment rate was 3.6 compared to the State rate of 3.7.

Richmond County had a labor force of 16,671 workers in 2018. The top 5 employers in Richmond County were Richmond County Schools, Perdue Farms, Moore Regional Hospital, Richmond County Government, and Richmond Community College. The average unemployment rate was 4.9 compared to the State rate of 3.7.

The NCDCLEA reported a labor force of 11,504 workers in Scotland County for 2018. In 2018, the top 5 employers in this area were Scotland County Schools, Scotland Memorial Hospital, the Department of Public Safety, FCC LLC, and Scotland County. The average unemployment rate was 6.1 compared to the State rate of 3.7.

SECTION 4

HAZARD IDENTIFICATION

This section describes how the Regional Hazard Mitigation Planning Team identified the hazards to be included this plan. It consists of the following five subsections:

- ♦ 4.1 Overview
- 4.2 Disaster Declarations
- ♦ 4.3 Summary of Hazard Impacts Since Previous Plan
- ♦ 4.4 Hazard Evaluation
- ♦ 4.5 Hazard Identification Results

44 CFR Requirement

44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

4.1 Overview

The Pee Dee Lumber Region is vulnerable to a wide range of natural and human-caused hazards that threaten life and property. Current FEMA regulations and guidance under the Disaster Mitigation Act of 2000 (DMA 2000) require, at a minimum, an evaluation of a full range of natural hazards. An evaluation of human-caused hazards (i.e., technological hazards, terrorism, etc.) is encouraged, though not required, for plan approval. The Pee Dee Lumber Region has included a comprehensive assessment of both types of hazards.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, the participating counties in the Pee Dee Lumber Region (Anson County, Montgomery County, Richmond County, and Scotland County) have identified a number of hazards that are to be addressed in its Regional Hazard Mitigation Plan. These hazards were identified through an extensive process that utilized input from the Pee Dee Lumber Regional Hazard Mitigation Planning Committee members, research of past disaster declarations in the participating counties¹, and review of the North Carolina State Hazard Mitigation Plan (2018). To maintain consistency, the Pee Dee Lumber Regional Hazard Mitigation Planning Committee voted to assess the same hazards that were identified in the most recent updated of the North Carolina Hazard Mitigation Plan. Therefore, since the development of the previous version of this plan, the hazard identified and included in the plan have changed. A list of all previous hazards covered in the 2018 Pee Dee Lumber Regional Hazard Mitigation Plan is viewable in Table 4.1, along with a summary of the hazards assessed in this 2022 update. Readily available information from reputable sources (such as federal and state agencies) was also evaluated to supplement information from these key sources.

 $^{^{1}}$ A complete list of disaster declarations for the Pee Dee Lumber Region can be found below in Section 4.3

TABLE 4.1: 2022 PEE DEE LUMBER HAZARDS UPDATE

2018 Pee Dee	Lumber Identified Hazards	2022 Pee Dee Lumber Ide	ntified Hazards	Sub hazards covered in 2022 Plan and Explanations
	Drought	Drought		Agricultural Drought, Hydrological Drought
	Hailstorm	orm		Assessed under "Tornadoes/Thunderstorms"
	Extreme Heat			
Atmospheric	Hurricane and Tropical Storm Hurricane and Coastal Hazards			Storm Surge associated with Hurricanes and Nor'easters, High Wind associated with Hurricanes and Nor'easters, Torrential Rain, Tornadoes Associates with Hurricanes, Severe Winter Weather associated with Nor'easters
Hazards	Hazards Lightning		Assessed under "Tornadoes/Thunderstorms"	
	Tornado	Tornadoes/Thunderstorms	Natural Hazards	Hailstorm, Torrential Rain associated with Severe Thunderstorms, Thunderstorm Wind, Lightning, Waterspout, High Wind
	Severe Thunderstorm			Assessed under "Tornadoes/Thunderstorms"
	Winter Storm and Freeze	Severe Winter Weather		Freezing Rain, Snowstorms, Blizzards, Wind Chill, Extreme Cold
Uudrologis	Dam and Levee Failure	Dam Failures		
Hydrologic Hazards	Erosion			Assessed under "Geological"
	Flood	Flooding		
Geologic	Earthquake	Earthquakes		
Hazards	Landslide	Geological		Landslides, Sinkholes, Erosion
Other	Wildfire	Wildfires	Other Hazards	
Hazards		Infectious Disease	2 3.10. 11020.03	
	Hazardous Materials Incident	Hazardous Substances		Hazardous Materials, Hazardous Chemicals, Oil Spill
Other Hazards		Terrorism	Technological Hazards	Chemical, Biological, Radiological, Nuclear, Explosive
		Cyber		
		Electromagnetic Pulse		

4.2 Disaster Declarations

Disaster declarations provide initial insight into the hazards that may impact the Pee Dee Lumber Regional planning area. Since 1984, fourteen presidential disaster declarations have been reported in the Pee Dee Lumber Region, which can be seen in **Table 4.2** below. This includes one severe storm and tornadoes, a declaration related to tornadoes, 3 severe winter or ice storms, a blizzard, five hurricanes, two tropical storms, and most recently, one pandemic disaster declaration.

Year	Disaster Number	Description	Anson County	Montgomery County	Richmond County	Scotland County
1984	699	Severe Storms & Tornadoes				Χ
1989	827	Tornadoes	X			
1989	844	Hurricane Hugo	Χ	X	Χ	
1996	1087	Blizzard of '96		X		
1996	1103	Winter Storm		X		
1996	1134	Hurricane Fran	Χ	X	Χ	Χ
1999	1292	Hurricane Floyd	Χ	X	Χ	Χ
2000	1312	Severe Winter Storm	Χ	X	Χ	Χ
2002	1448	Severe Ice Storm	X	X	Χ	
2004	1546	Tropical Storm Frances				Χ
2016	4285	Hurricane Matthew	Χ	X	Χ	Χ
2018	4393	Hurricane Florence	X	X	Χ	Χ
2019	4412	Tropical Storm Michael		X		
2020	4487	COVID-19 Pandemic	X	Χ	Χ	Χ

TABLE 4.2: PEE DEE LUMBER REGION DISASTER DECLARATIONS

4.3 Summary of Hazard Impacts Since Previous Plan

Since the approval date of the previous Pee Dee Lumber Regional Hazard Mitigation Plan (3/22/2018), there have been 212 hazard events recorded for the region in the National Centers for Environmental Information Storm Events Database. It is important to take note of those hazard events and consider them in the *Hazard Identification* section to help ensure that the appropriate hazards are being considered in the risk assessment sections and in the Mitigation Strategy. **Table 4.3** documents the hazard events recorded. Details for some of these events are discussed in further detail in the *Hazard Profiles* section.

Hazard Type*	Number of Reported Events in Anson County	Number of Reported Events in Montgomery County	Number of Reported Events in Richmond County	Number of Reported Events in Scotland County
Cold/Wind Chill	0	0	0	0
Flash Flood	9	3	5	5
Flood	1	1	1	1
Hail	1	3	2	2

TABLE 4.3: SUMMARY OF HAZARD EVENTS SINCE PREVIOUS PLAN

Hazard Type*	Number of Reported Events in Anson County	Number of Reported Events in Montgomery County	Number of Reported Events in Richmond County	Number of Reported Events in Scotland County
Heavy Snow	0	0	0	0
High Wind	0	0	0	1
Lightning	0	0	0	0
Strong Wind	3	0	2	2
Thunderstorm Wind	36	36	29	24
Tornado	2	0	0	0
Tropical Storm	3	3	3	4
Winter Storm	2	5	4	3
Winter Weather	4	4	4	4
TOTAL NUMBER OF REPORTED EVENTS	61	55	50	46

Source: National Centers for Environmental Information

Appendix H includes detailed information about all previous historical hazard occurrence events that have occurred in the region as reported to the National Centers for Environmental Information. Some more detailed information about previous historical hazards events can be found in Section 5: Hazard Profiles under each separate hazard profile.

4.4 Hazard Evaluation

Table 4.4 documents the evaluation process used for determining which of the initially identified hazards are considered significant enough to warrant 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 further assessed, 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). Hazard events not identified for inclusion at this time may be addressed during future evaluations and updates of the risk assessment if deemed necessary by the Pee Dee Lumber Regional Hazard Mitigation Planning Committee during the plan update process.

TABLE 4.4: DOCUMENTATION OF THE HAZARD EVALUATION PROCESS

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
NATURAL HAZARDS			

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Avalanche	NO	 Review of US Forest Service National Avalanche site Review of the NC State Hazard Mitigation Plan Review of FEMA's Multi- Hazard Identification and Risk Assessment Review of the previous Pee Dee Lumber Hazard Mitigation Plan 	 There is no risk of avalanche events in North Carolina. The United States avalanche hazard is limited to mountainous western states including Alaska, as well as some areas of low risk in New England Avalanche was not included in the previous Pee Dee Lumber Hazard Mitigation Plan
Drought	YES	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of the NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Regional Hazard Mitigation Plan 	 There are reports of drought conditions in 19 of the last 19 years (2000-2019) in the Pee Dee Lumber Region, according to the North Carolina Drought Monitor. Droughts are discussed in NC State Hazard Mitigation Plan Drought is included in the previous Pee Dee Lumber Hazard Mitigation Plan
Hailstorm	YES (Assessed under Tornadoes/Thunde rstorms)	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Hazard Mitigation Plan Review of NOAA NCEI Storm Events Database 	 Hailstorm events are discussed in the state plan as its own hazard NCEI reports 183 hailstorm events (0.75 to 4.5-inch size hail) for the Pee Dee Lumber Region between 1969 and 2019. For these events there was almost \$5.27 million (2020 dollars) in property damages reported. Hail was addressed as an individual hazard in the previous Pee Dee Lumber Hazard Mitigation Plan

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Excessive Heat	YES	 Review of NOAA NCEI Storm Events Database Review of the North Carolina State Hazard Mitigation Plan Review of the previous Pee Dee Lumber Hazard Mitigation Plan 	 NCEI reported two excessive heat events in the Pee Dee Lumber region The NC State Hazard Mitigation Plan includes Excessive Heat as an identified Hazard for North Carolina Excessive heat was included in the previous hazard mitigation plan as Extreme Heat
Hurricane and Coastal Hazards	YES	 Review of NC State Hazard Mitigation Plan Analysis of NOAA historical tropical cyclone tracks and National Hurricane Center Website Review of NOAA NCEI Storm Events Database Review of historical presidential disaster declarations Review of the previous Pee Dee Lumber Hazard Mitigation Plan 	 Hurricanes and coastal hazard events are discussed in the NC State Hazard Mitigation Plan Hurricanes and coastal hazards were addressed as hurricanes and tropical storms in the previous Pee Dee Lumber Hazard Mitigation Plan. NOAA historical records indicate 64 tropical storms or hurricane events have come within 75 miles of the Pee Dee Lumber Region since 1850. NCEI reported 7 hurricane, tropical storm, or tropical depression events in the Pee Dee Lumber Region
Lightning	YES (Assessed under Tornadoes/ Thunderstorms)	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Hazard Mitigation Plan Review of NOAA NCEI Storm Events Database 	 Lightning events are discussed in the NC State Hazard Mitigation Plan as part of the Severe Thunderstorm hazard. NCEI reports 7 lightning events for the Pee Dee Lumber Region since 1950. These events have resulted in a recorded 1 injury and \$300 thousands (2020 dollars) in property damage. Lightning is addressed as an individual hazard in the previous

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
		 Review of Vaisala's NLDN Lightning Flash Density Map 	Pee Dee Lumber Hazard Mitigation Plan. To maintain consistency with the NC State Hazard Mitigation Plan, it will be addressed under the Tornadoes/Thunderstorms section.
Nor'easter	NO	 Review of the NC State Hazard Mitigation Plan Review of the NOAA NCEI Storm Events Database Review of the previous Pee Dee Lumber Hazard Mitigation plan 	 Nor'easters are discussed in the state plan as a part of the Hurricane hazard. NCEI does not report any Nor'easter activity for the Pee Dee Lumber Region. However, Nor'easter activity may have affected the region as severe winter storms. In this case, the activity would be reported under winter storm events. This hazard was not addressed in the previous plan.
Tornado/Thunderstorm	YES	Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Hazard Mitigation Plan Review of NOAA NCEI Storm Events Database	 Tornado events are discussed in the NC State Hazard Mitigation Plan under Severe Thunderstorm. Tornado events were addressed in the previous Pee Dee Lumber Hazard Mitigation Plan as an individual hazard. NCEI reports 28 tornado events in Pee Dee Lumber Region counties since 1950. These events have resulted in 10 injuries and over \$15 million (2020 dollars) in property damage with the most severe being an F4.
Severe Thunderstorm	YES (Assessed under Tornadoes/ Thunderstorms)	Review of FEMA's Multi-Hazard	Severe thunderstorm events are discussed in the NC State Hazard

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
		Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Regional Hazard Mitigation Plan Review of NOAA NCEI Storm Events Database	 Mitigation Plan Severe thunderstorm events were addressed as Thunderstorm Wind/High Wind in the previous Pee Dee Lumber hazard mitigation plan NCEI reports 530 thunderstorm wind and high wind events in the Pee Dee Lumber region since 1959. These events have resulted in 1 injury, 6 deaths and over \$4.4 million (2020 dollars) in property damage.
Severe Winter Weather	YES	 Review of NC State Hazard Mitigation Plan Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of historical Presidential disaster declarations. Review of NOAA NCEI Storm Events Database Review of the previous Pee Dee Lumber Regional Hazard Mitigation Plan 	 Severe winter storms, including snow storms and ice storms, are discussed in the NC State Hazard Mitigation Plan. Severe Winter Weather events were addressed as Winter Storms and Freezes in the previous Pee Dee Lumber hazard mitigation plan. NCEI reports that the Pee Dee Lumber counties have been affected by 140 severe winter weather events since 1993. These events resulted in no property damage. Winter storms and ice storms were responsible for four of the fourteen disaster declarations in the Pee Dee Lumber region.
Earthquake	YES	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Hazard 	 Earthquake events are discussed in the NC State Hazard Mitigation Plan Earthquakes have occurred in and around the State of North Carolina in the past. The state is affected by the Charleston and the New Madrid (near Missouri)

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
		Mitigation Plan Review of the National Geophysical Data Center USGS Earthquake Hazards Program website	Fault lines which have generated a magnitude 8.0 earthquake in the last 200 years. The previous Pee Dee Lumber hazard mitigation plan addresses earthquakes. 21 events are known to have occurred in the region according to the National Geophysical Data Center. The greatest MMI reported was a VII (very strong). According to USGS seismic hazard maps, the peak ground acceleration (PGA) with a 10% probability of exceedance in 50 years for the Pee Dee Lumber Region is approximately 3 to 4%g. FEMA recommends that earthquakes be further evaluated for mitigation purposes in areas with a PGA of 3%g or more.
Expansive Soils	NO	 Review of NC State Hazard Mitigation Plan Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of USDA Soil Conservation Service's Soil Survey Review of the previous Pee Dee Lumber Regional Hazard Mitigation Plan 	 Expansive soils are identified in the NC State Hazard Mitigation Plan but they are not included as a top hazard for the Region The previous Pee Dee Lumber hazard mitigation plan did not identify expansive soils as a potential hazard. According to FEMA and USDA sources, the Pee Dee Lumber Region is located in an area that has a "little to no" clay swelling potential.
Geological (Landslides, Sinkholes, Erosion)	YES	 Review of NC State Hazard Mitigation Plan Review of USGS Landslide Incidence and Susceptibility 	Landslide/debris flow events are discussed in the state plan and ranked as a hazard in the in the Region which includes the Pee Dee Lumber counties

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
		 Hazard Map Review of the North Carolina Geological Survey database of historic landslides Review of the previous Pee Dee Lumber Regional Hazard Mitigation Plan 	 The previous Pee Dee Lumber hazard mitigation plan addressed landslides as an individual hazard. USGS landslide hazard maps indicate "low landslide incidence" is found across the Pee Dee Lumber Region. All counties also have areas of moderate susceptibility and low incidence. Data provided by NCGS indicate no recorded landslide events in the Pee Dee Lumber Region. Coastal erosion is discussed in the NC State Hazard Mitigation Plan but only for coastal areas (there is no discussion of riverine erosion). The Pee Dee Lumber Region is not located in a coastal area. Riverine erosion is discussed in the previous Pee Dee Lumber hazard mitigation plan.
Land Subsidence	NO	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Regional Hazard Mitigation Plan 	 The state plan delineates certain areas that are susceptible to land subsidence hazards in North Carolina; however, the Pee Dee Lumber counties have zero vulnerability. The state plan delineates certain areas that are susceptible to land subsidence hazards in North Carolina; however, none of these areas are located in Pee Dee Lumber counties. The previous Pee Dee Lumber hazard mitigation plan did not identify land subsidence as a potential hazard.

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Tsunami	NO	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Regional hazard mitigation plan Review of FEMA "Howto" mitigation planning guidance (Publication 386-2, "Understanding Your Risks – Identifying Hazards and Estimating Losses). 	 No record exists of a catastrophic Atlantic basin tsunami impacting the mid-Atlantic coast of the United States. Tsunami inundation zone maps are not available for communities located along the U.S. East Coast. Tsunamis are discussed in the state plan and described as a "greater" hazard for the state. However, the region which includes the Pee Dee Lumber counties, scored a zero for tsunami hazard risk. FEMA mitigation planning guidance suggests that locations along the U.S. East Coast have a relatively low tsunami risk and need not conduct a tsunami risk assessment at this time.
Volcano	NO	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of USGS Volcano Hazards Program website Review of the previous Pee Dee Lumber Hazard Mitigation Plan 	 There are no active volcanoes in North Carolina. There has not been a volcanic eruption in North Carolina in over 1 million years No volcanoes are located near the Pee Dee Lumber Region.
Dam Failure	YES	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State 	 Dam failure is identified as a hazard in the NC State Hazard Mitigation Plan. The previous Pee Dee Lumber Hazard Mitigation Plan identifies

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
		 Hazard Mitigation Plan Review of the previous Pee Dee Lumber Regional Hazard Mitigation Plan Review of North Carolina Dam Safety Program's NC Dam Inventory as of 11/20/19 	Dam failure hazard as Dam and Levee Failure. • Per the NC Dam Inventory, there are 176 dams in total in the Pee Dee Lumber region, of those, 29 are high hazard dams in the planning region. (High hazard is defined as "where failure will likely cause loss of life or serious damage to homes, industrial and commercial buildings, important public utilities, primary highways, or major railroads.")
Flooding	YES	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Regional Hazard Mitigation Plan Review of NOAA NCEI Storm Events Database Review of historical disaster declarations Review of FEMA DFIRM data Review of FEMA's NFIP Community Status Book and Community Rating System (CRS) 	 Floods occur in all 50 states and in the U.S. territories. The flood hazard is thoroughly discussed in the NC State Hazard Mitigation Plan. The Pee Dee Lumber Region was found to have relatively low vulnerability compared to the state. The previous Pee Dee Lumber hazard mitigation plan addressed flood hazard. NCEI reports that Pee Dee Lumber Region counties have been affected by 84 floods events since 1950. These events caused an estimated \$36.5 million (2020 dollars) in property damages None of the fifteen Presidential Disaster Declarations were flood-related 3.5% of the Pee Dee Lumber Region is located in an identified floodplain (100- or 500-year). 13 municipalities in the Pee Dee Lumber Region do not participate in the NFIP; however, no jurisdictions currently participate in the CRS.

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?		
		OTHER HAZARDS			
Wildfires	YES	 Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of NC State Hazard Mitigation Plan Review of previous Pee Dee Lumber Regional Hazard Mitigation Plan Review of Southern Wildfire Risk Assessment (SWRA) Data Review of the NC Division of Forest Resources website 	 Wildfires occur in virtually all parts of the United States. Wildfire hazard risks will increase as low-density development along the urban/wildland interface increases. Wildfires are identified as a hazard in the state plan. The previous Pee Dee Lumber Hazard Mitigation plan addressed wildfire as a hazard. A review of SWRA data indicates that there are areas of elevated concern in the Pee Dee Lumber Region. According to the North Carolina Division of Forest Resources, the Pee Dee Lumber Region experiences an average of 439 fires each year which burn a combined 1,754 acres. 		
Hazardous Substances	YES	Review of FEMA's Multi-Hazard Identification and Risk Assessment Review of previous Pee Dee Lumber Hazard Mitigation Plan Review of the NC State Hazard Mitigation Plan	 The previous Pee Dee Lumber Hazard Mitigation Plan lists the Hazardous Substances hazard as Hazardous Materials Incidents. Review of Pipeline and Hazardous Materials Safety Administration data indicates 190 HAZMAT incidents occurred in the Pee Dee Lumber region. EPA Toxic Release Inventory indicates fifty-seven Toxic Release Inventory (TRI) facilities in the Pee Dee Lumber region. 		
Infectious Disease	YES	Review of the previous	Infectious Disease is identified as a hazard in the state plan		

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
		Pee Dee Lumber Regional Hazard Mitigation Plan Review of the previous Pee Dee Lumber Hazard Mitigation Plan	 Although the previous hazard mitigation plans for the region did not include infectious diseases as a hazard, it is assessed in this update to maintain consistency with the NC State Hazard Mitigation Plan. Infectious Disease has caused one of the fifteen disaster declarations in the Pee Dee Lumber Region.
	TECH	INOLOGICAL HAZARDS	
Terrorism	Yes	 Review of the NC State Hazard Mitigation Plan Review of the previous Pee Dee Lumber Hazard Mitigation Plan Review of local Official knowledge. 	 Although the previous hazard mitigation plans for the region did not include terrorism as a hazard, it is assessed in this update to maintain consistency with the NC State Hazard Mitigation Plan This hazard will assess chemical, biological, nuclear, and explosive terrorism events.
Radiological Emergency – Fixed Nuclear Facilities	Yes	 Review of the previous Pee Dee Lumber Regional Hazard Mitigation Plan Review of IAEA list of fixed nuclear power stations in the United States Discussion with local officials about location of nuclear power stations 	 Radiological Emergency hazard was not included in the previous Pee Dee Lumber Regional Hazard Mitigation Plan The HB Robison Electrical Power Station is located within a 50-mile radius of Anson, Richmond, and Scotland counties in Hartsville, SC Nuclear events can sometimes be caused by natural hazards and deserve some attention in this plan due to some areas of the region being located within the 50-mile evacuation zone for the HB Robison Electrical Station.

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Cyber	YES	Review of NC State Hazard Mitigation Plan	Changing future conditions encourage the assessment of the possibility of a cyber-attack with the increase in global technology
Electromagnetic Pulse	YES	Review of NC State Hazard Mitigation Plan	Changing future conditions encourage the assessment of the possibility of an electromagnetic pulse with the increase in global technology

4.5 Hazard Identification Results

Table 4.5 provides a summary of the hazard identification and evaluation process noting which of the 24 initially identified hazards are considered significant enough for further evaluation through this Plan's rick assessment (marked with a "☑").

TABLE 4.5: SUMMARY RESULTS OF THE HAZARD IDENTIFICATION AND EVALUATION PROCESS

	NATURAL HAZARDS		TECHNOLOGICAL HAZARDS
	Avalanche	\checkmark	Radiological Emergency – Fixed Nuclear Facilities
$\overline{\checkmark}$	Drought	V	Terrorism
$\overline{\checkmark}$	Hailstorm**	V	Cyber
$\overline{\checkmark}$	Excessive Heat	$\overline{\mathbf{V}}$	Electromagnetic Pulse
$\overline{\checkmark}$	Hurricane and Coastal Hazards		OTHER HAZARDS
$\overline{\checkmark}$	Flooding	$\overline{\checkmark}$	Hazardous Substances
$\overline{\checkmark}$	Lightning**	$\overline{\checkmark}$	Wildfires
	Nor'easter	$\overline{\checkmark}$	Infectious Disease
$\overline{\mathbf{A}}$	Tornadoes/Thunderstorms		
$\overline{\mathbf{A}}$	Severe Winter Weather		
$\overline{\mathbf{A}}$	Earthquakes		
$\overline{\mathbf{A}}$	Dam Failures		
$\overline{\checkmark}$	Geological		
$\overline{\checkmark}$	Infectious Disease		
	Expansive Soils		
	Land Subsidence		
	Tsunami		
	Volcano		
	Storm Surge		
	Erosion		

☑ = Hazard considered significant enough for further evaluation in the Pee Dee Lumber Region hazard risk assessment.

^{* * =} Hazard is assessed as a sub hazard under the Tornadoes/Thunderstorms hazard.

SECTION 5 HAZARD PROFILES

This section includes detailed hazard profiles for each of the hazards identified in the previous section (*Hazard Identification*) as significant enough for further evaluation in the Pee Dee Lumber Regional Hazard Mitigation Plan. It contains the following subsections:

- ♦ 5.1 Overview
- ♦ 5.2 Study Area
- ♦ 5.3 Drought
- ♦ 5.4 Excessive Heat
- ♦ 5.5 Hurricane and Coastal Hazards
- ♦ 5.6 Tornadoes/Thunderstorms
- ♦ 5.7 Severe Winter Weather
- ♦ 5.8 Earthquakes
- ♦ 5.9 Geological
- ♦ 5.10 Dam Failure
- ♦ 5.11 Flooding

- ♦ 5.12 Wildfires
- ♦ 5.13 Infectious Disease
- ♦ 5.14 Hazardous Substances
- 5.15 Radiological Emergency Fixed Nuclear Facilities
- ♦ 5.16 Terrorism
- ♦ 5.17 Cyber
- ♦ 5.18 Electromagnetic Pulse
- ♦ 5.19 Conclusions on Hazard Risk
- ♦ 5.20 Final Determinations

44 CFR Requirement

44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, location and extent of all-natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazards events and on the probability of future hazard events.

5.1 OVERVIEW

This section includes detailed hazard profiles for each of the hazards identified in the previous section (*Hazard Identification*) as significant enough for further evaluation in the Pee Dee Lumber Region's hazard risk assessment by creating a hazard profile. Each hazard profile includes a general description of the hazard, its location and extent, notable historical occurrences and the probability of future occurrences. Each profile also includes specific items noted by members of the Pee Dee Lumber Regional Hazard Mitigation Planning Committee as it relates to unique historical or anecdotal hazard information for the counties in the Pee Dee Lumber Region or a participating municipality withinthem.

The following hazards were identified:

Natural

- Drought
- Excessive Heat
- Hurricane and Coastal Hazards
- ♦ Tornadoes/Thunderstorms (including hailstorms and lightning)
- Severe Winter Weather
- Earthquakes
- Geological (including landslides, sinkholes, and erosion)
- ◆ Dam Failure
- ◆ Flooding

Other

- Wildfires
- Infectious Disease

♦ Manmade/Technological

- Hazardous Substances
- **♦** Terrorism
- Cyber
- ♦ Electromagnetic Pulse

5.2 STUDY AREA

The Pee Dee Lumber Region includes four counties: Anson, Montgomery, Richmond, and Scotland. **Table 5.1** provides a summary table of the participating jurisdictions within each county. In addition, **Figure 5.1** provides a base map, for reference, of the Pee Dee Lumber Region.

TABLE 5.1: PARTICIPATING JURISDICTIONS IN THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

Anson County	Richmond County		
Ansonville	Dobbins Heights		
Lilesville	Ellerbe		
McFarlen	Hamlet		
Morven	Hoffman		
Peachland	Norman		
Polkton	Rockingham		
Wadesboro			
Montgomery County	Scotland County		
Biscoe	East Laurinburg		
Candor	Gibson		
Mount Gilead	Laurinburg		
Star	Magram		
Troy	Wagram		

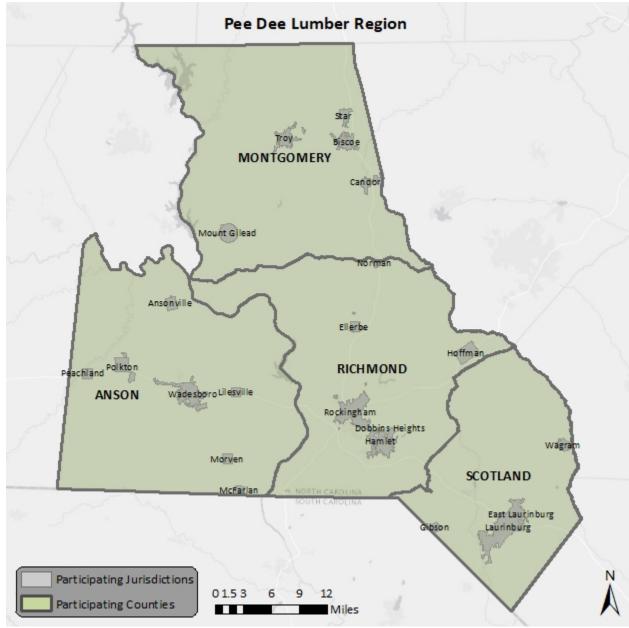


FIGURE 5.1: PEE DEE LUMBER REGION BASE MAP

Table 5.2 lists each significant hazard for the Pee Dee Lumber Region and identifies whether or not it has been determined to be a specific hazard of concern for the 22 municipal jurisdictions and each of the four county's unincorporated areas. This is the based on the best available data and information from the Pee Dee Lumber Regional Hazard Mitigation Planning Committee. (• = hazard of concern)

TABLE 5.2 SUMMARY OF IDENTIFIED HAZARD EVENTS IN THE PEE DEE LUMBER REGION

TABLE 5.2	SUMIN	IAKY (JT IUEN		atural	ARD E	VEN IS		IE PEE	Otl	LUMBI			ologica	
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Jurisdiction	Drought	Excessive Heat	Hurricane and Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Geological	Dam Failure	Flooding	Wildfires	Infectious Disease	Hazardous Substances	Terrorism	Cyber	Electromagnetic Pulse
Anson County															
Ansonville	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Lilesville	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
McFarlen	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Morven	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Peachland	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Polkton	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Wadesboro	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Montgomery County															
Biscoe	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Candor	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Mount Gilead	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Star	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Troy	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Richmond County															
Dobbins Heights	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ellerbe	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hamlet	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hoffman	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Norman	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rockingham	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Scotland County															
East Laurinburg	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Gibson	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Laurinburg	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Wagram	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Unincorporated Area	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

NATURAL HAZARDS

5.3 DROUGHT

5.3.1 Background and Description

Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. High temperatures, high winds, and low humidity can exacerbate drought conditions. In addition, human actions and demands for water resources can hasten drought-related impacts.

Droughts are typically classified into one of four types: 1) meteorological, 2) hydrologic, 3) agricultural, or 4) socioeconomic. **Table 5.3** presents definitions for these types of drought.

TABLE 5.3 DROUGHT CLASSIFICATION DEFINITIONS

Meteorological Drought	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
Hydrologic Drought	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
Agricultural Drought	Soil moisture deficiencies relative to water demands of plant life, usually crops.
Socioeconomic Drought	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

Droughts are slow-onset hazards, but, over time, can have very damaging affects to crops, municipal water supplies, recreational uses, and wildlife. If drought conditions extend over a number of years, the direct and indirect economic impact can be significant.

The Palmer Drought Severity Index (PDSI) is based on observed drought conditions and range from -0.5 (incipient dry spell) to -4.0 (extreme drought). Evident in **Figure 5.2**, the Palmer Drought Severity Index Summary Map for the United Stated, drought affects most areas of the United States, but is less severe in the Eastern United States.

Palmer Drought Severity Index
1895-1995
Percent of time in severe and extreme drought

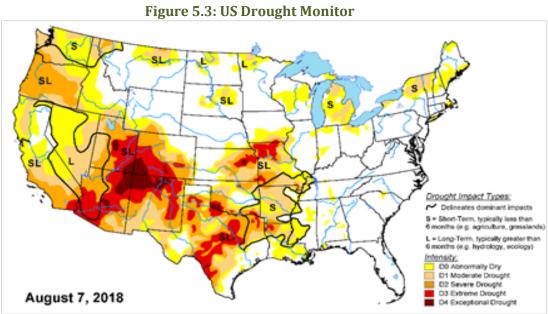
% of time PDSI ≤ .3

Less than 5%
5% to 9.9%
10% to 14.9%
15% to 19.9%
20% or greater

FIGURE 5.2: PALMER DROUGHT SEVERITY INDEX SUMMARY MAP FOR THE UNITED STATES

Source: National Drought Mitigation Center

The figure above is the most updated version of the Palmer Drought Severity Index; however, the US Drought Monitor is updated on a weekly basis. An archived map from August of 2018 can be seen below in **Figure 5.3** to reflect more current drought conditions in the US.



Source: US Drought Monitor

5.3.2 Location and Spatial Extent

Drought typically covers a large area and cannot be confined to any geographic or political boundaries. According to the Palmer Drought Severity Index (Figure 5.4), South-central North Carolina has a relatively low risk for drought hazard. However, local areas may experience much more severe and/or frequent drought events than what is represented on the Palmer Drought Severity Index map. Furthermore, it is assumed that the Pee Dee Lumber Region is uniformly exposed to drought, making the spatial extent potentially widespread. It is also notable that drought conditions typically do not cause significant damage to the built environment.

5.3.3 Historical Occurrences

The North Carolina Drought Management Advisory Council reports data on North Carolina drought conditions from 2000 to 2019 through the North Carolina Drought Monitor. It classifies drought conditions using the scale set by the US Drought Monitor, which classifies conditions on a scale of D0 to D4. Each class is further explained in **Table 5.4**.

TABLE 5.4: USDM DROUGHT CLASSIFICATIONS

Scale	Description	Impacts
D0	Abnormally Dry	Short-term dryness slowing planting, growth of cropsSome lingering water deficitsPastures or crops not fully recovered
D1	Moderate Drought	Some damage to crops, pasturesSome water shortages developingVoluntary water-use restrictions requested
D2	Severe Drought	Crop or pasture loss likelyWater shortages commonWater restrictions imposed
D3	Extreme Drought	- Major crop/pasture losses- Widespread water shortages or restrictions
D4	Exceptional Drought	Exceptional and widespread crop/pasture lossesShortages of water creating water emergencies

Data from the North Carolina Drought Management Advisory Council and National Centers for Environmental Information (NCEI) were used to ascertain historical drought events in the Pee Dee Lumber Region. Since 2000, the longest duration of drought (D1-D4) in North Carolina lasted 155 weeks beginning on January 4, 2000 and ending on December 17, 2002. The most intense period of drought occurred the week of December 11, 2007, where D4 affected 66.2% of North Carolina land. **Figure 5.4** shows the percent area of North Carolina that has experienced drought conditions from 2000 to 2020.

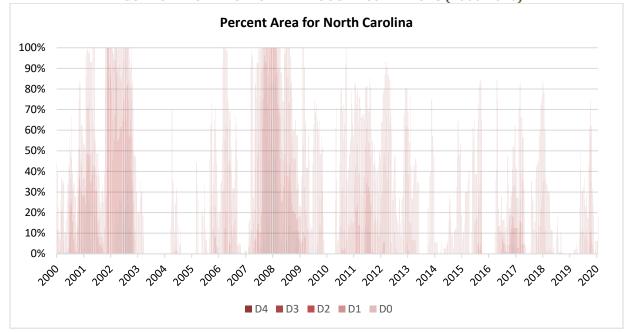


FIGURE 5.4: NORTH CAROLINA DROUGHT CONDITIONS (2000-2020)

Source: NIDIS; Drought.gov, US Drought Portal

According to the North Carolina Drought Monitor, all of the counties in the Pee Dee Lumber Region has had drought occurrences during the last nineteen years (2000-2019) and all four counties have reached "exceptional" drought level (**Table 5.5**). It should be noted that the North Carolina Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in less severe condition.

TABLE 5.5: SUMMARY OF DROUGHT OCCURRENCES IN THE PEE DEE LUMBER REGION

Year	Anson County	Montgomery County	Richmond County	Scotland County
2000	Severe Drought	Severe Drought	Severe Drought	Moderate Drought
2001	Extreme Drought	Severe Drought	Extreme Drought	Severe Drought
2002	Exceptional Drought	Exceptional Drought	Exceptional Drought	Exceptional Drought
2003	Abnormally Dry	Abnormally Dry	Abnormally Dry	Abnormally Dry
2004	Moderate Drought	Moderate Drought	Moderate Drought	Abnormally Dry
2005	Severe Drought	Severe Drought	Severe Drought	Moderate Drought
2006	Moderate Drought	Severe Drought	Moderate Drought	Moderate Drought
2007	Exceptional Drought	Exceptional Drought	Exceptional Drought	Exceptional Drought
2008	Exceptional Drought	Exceptional Drought	Exceptional Drought	Exceptional Drought
2009	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2010	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2011	Severe Drought	Severe Drought	Severe Drought	Severe Drought
2012	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2013	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2014	Abnormally Dry	Abnormally Dry	Abnormally Dry	Abnormally Dry

Year	Anson County	Montgomery County	Richmond County	Scotland County
2015	Moderate Drought	Abnormally Dry	Abnormally Dry	Abnormally Dry
2016	Moderate Drought	Abnormally Dry	Abnormally Dry	Abnormally Dry
2017	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2018	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2019	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought

Source: North Carolina Drought Monitor

The National Centers for Environmental Information did not report any drought conditions in the Pee Dee Lumber region between 1950 and 2020. As noted above, exceptional drought conditions were present in 2002, 2007 to 2008 in all the counties in the Pee Dee Lumber region. No losses were reported but it should be noted that some agricultural losses likely occurred.

5.3.4 Probability of Future Occurrences

Based on historical occurrence information, it is assumed that all of the Pee Dee Lumber Region has a probability level of likely (10-100 percent annual probability) for future drought events. This hazard may vary slightly by location but each area has an equal probability of experiencing a drought. While reports indicate that there is a much lower probability for extreme, long-lasting drought conditions, NOAA also predicts that central North Carolina to have areas of persistent drought and further drought development¹.

5.4 EXCESSIVE HEAT

5.4.1 Background and Description

Extreme heat, like drought, poses little risk to property. However, extreme heat can have devastating effects on health. Extreme heat is often referred to as "extreme heat" or a "heat wave." According to the National Weather Service, there is no universal definition for a heat wave, but the standard U.S. definition is any event lasting at least three days where temperatures reach ninety degrees Fahrenheit or higher. However, it may also be defined as an event at least three days long where temperatures are ten degrees greater than the normal temperature for the affected area. Heat waves are typically accompanied by humidity but may also be very dry. These conditions can pose serious health threats causing an average of 1,500 deaths each summer in the United States².

According to the National Oceanic and Atmospheric Administration, heat is the number one weather-related killer among natural hazards, followed by frigid winter temperatures¹. The National Weather Service devised the Heat Index as a mechanism to better inform the public of heat dangers. The Heat Index Chart, shown in **Figure 5.5**, uses air temperature and humidity to determine the heat index or apparent temperature. **Table 5.6** shows the dangers associated with different heat index temperatures. Some populations, such as the elderly and young, are more susceptible to heat danger than other segments of the population.

¹ U.S. Seasonal Drought Outlook. National Weather Service Climate Prediction Center. http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php

² http://www.noaawatch.gov/themes/heat.php

FIGURE 5.5: NWS HEAT INDEX CHART

							٦	Temp	eratu	re (°F)						
		80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
	40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
	45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
	50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
8	55	81	84	86	89	93	97	101	106	112	117	124	130	137			
Relative Humidity (%)	60	82	84	88	91	95	100	105	110	116	123	129	137				
Ĕ	65	82	85	89	93	98	103	108	114	121	128	136					
Ŧ	70	83	86	90	95	100	105	112	119	126	134						
ä÷	75	84	88	92	97	103	109	116	124	132							
æ	80	84	89	94	100	106	113	121	129								
	85	85	90	96	102	110	117	126	135								
	90	86	91	98	105	113	122	131									
	95	86	93	100	108	17	127										
	100	87	95	103	112	121	132										
Caution Extreme Caution Danger Extreme Danger							r										

Source: NOAA

TABLE 5.6: HEAT DISORDERS ASSOCIATED WITH HEAT INDEX TEMPERATURE

Heat Index Temperature (Fahrenheit)	Description of Risks		
80°- 90°	Fatigue possible with prolonged exposure and/or physical activity		
90°- 105°	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity		
105°- 130°	Sunstroke, heat cramps, and heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity		
130° or higher	Heatstroke or sunstroke is highly likely with continued exposure		

Source: National Weather Service, NOAA

In addition, NOAA has seventeen metropolitan areas participating in the Health Watch/Warning System in order to better inform and warn the public of heat dangers. A Heat Health Watch is issued when conditions are favorable for an excessive heat event in the next 12 to 48 hours. A Heat Warning is issued when an excessive heat event is expected in the next 36 hours. Furthermore, a warning is issued when the conditions are occurring, imminent, or have a high likelihood of occurrence. Urban areas participate in the Heat Health Watch/Warning System because urban areas are at greater risk to heat affects. Stagnant atmospheric conditions trap pollutants, thus adding unhealthy air to excessively hot temperatures. In addition, the "urban heat island effect" can produce significantly higher nighttime temperatures because asphalt and concrete (which store heat longer) gradually release heat at night.

5.4.2 Location and Spatial Extent

Excessive heat typically impacts a large area and cannot be confined to any geographic or political boundaries. The entire Pee Dee Lumber Region is susceptible to extreme heat conditions.

5.4.3 Historical Occurrences

Data from the National Centers for Environmental Information was used to determine historical extreme heat and heat wave events in the Pee Dee Lumber Region. Two events were reported:

- July 22, 1998 Excessive Heat Maximum temperatures reached between 98and 103-degrees Fahrenheit with heat index values of around 110 degrees in the afternoon across central North Carolina.
- **July 23, 1999** *Excessive Heat* Two deaths related to heat exposure were reported in Scotland County.

In addition, information from the State Climate Office of North Carolina was reviewed to obtain historical temperatures in the region. Temperature information was reported 1870 to 2019. The recorded maximum for the Pee Dee Lumber Region is 108 degrees Fahrenheit in Hamlet (Richmond County) in 2007, and in Mount Gilead (Montgomery County) in 1944. The State Climate Office of North Carolina also reports average maximum temperatures in various locations in the region. **Table 5.7** below shows the maximum high temperature recorded for each county in the Pee Dee Lumber region. The most centralized location is in Hamlet (Richmond County). **Table 5.8** shows the average maximum temperatures from 1971 to 2000 at the Hamlet observation station which can be used as a general comparison for the region.

Table 5.7: MAXIMUM TEMPERATURE RECORDED FOR THE PEE DEE LUMBER REGION

	Anson County	Montgomery County	Richmond County	Scotland County				
Max Temp. Recorded (°F)	107 °F	108 °F	108 °F	107 °F				

TABLE 5.8: AVERAGE MAXIMUM TEMPERATURE IN HAMLET, RICHMOND COUNTY

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Avg. Max	52.3	52.1	56.8	64.3	74.8	79.7	83.1	80.7	76.3	67.8	60.3	52.8
(°F)	32.3	32.1	30.0	04.5	74.0	75.7	03.1	00.7	70.5	07.0	00.5	32.0

5.4.4 Probability of Future Occurrences

Based on historical occurrence information, it is assumed that all of the Pee Dee Lumber Region has a probability level of likely (10-100 percent annual probability) for future extreme heat events to impact the region.

5.5 HURRICANE AND COASTAL HAZARDS

5.5.1 Background

Hurricanes and tropical storms are classified as cyclones and defined as 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.

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. The peak of the Atlantic hurricane season is in early to mid-September and the average number of storms that reach hurricane intensity per year in the Atlantic basin is about six.

As an incipient 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 (**Table 5.9**), which rates hurricane intensity on a scale of 1 to 5, with 5 being the most intense.

TABLE 5.9: SAFFIR-SIMPSON SCALE

Category	Maximum Sustained Wind Speed (MPH)	Minimum Surface Pressure (Millibars)
1	74-95	Greater than 980
2	96-110	979-965
3	111-129	964-945
4	130-156	944-920
5	157 +	Less than 920

Source: National Hurricane Center

The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds and barometric pressure, 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 5.10** describes the damage that could be expected for each category of hurricane. Damage during hurricanes may also result from spawned tornadoes, storm surge, and inland flooding associated with heavy rainfall that usually accompanies these storms.

TABLE 5.10: HURRICANE DAMAGE CLASSIFICATIONS

Storm Category	Damage Level	Description of Damages	Photo Example
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 curtainwall 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 curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach areas. Terrain may be flooded well inland.	JAN.
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

5.5.2 Location and Spatial Extent

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and they can affect the Pee Dee Lumber Region. All areas in the Pee Dee Lumber Region are equally susceptible to hurricane and tropical storms.

5.5.3 Historical Occurrences

According to the National Hurricane Center's historical storm track records, 64 hurricane or tropical storm tracks have passed within 75 miles of the Pee Dee Lumber Region since 1850³. This includes: three Category 3 hurricanes, five Category 2 hurricanes, seven Category 1 hurricanes, forty-two tropical storms, and seven tropical depressions.

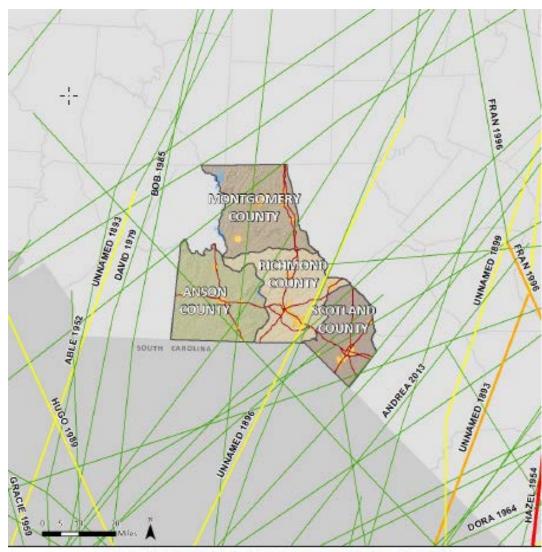
Of the recorded storm events, nine tropical storms and one unnamed Category 2 storm (in 1896) traversed directly through the Pee Dee Lumber Region as shown in **Figure 5.6**. **Table 5.11** provides for each event the date of occurrence, name (if applicable), maximum wind speed (as recorded within 75 miles of the Pee Dee Lumber Region) and Category of the storm based on the Saffir-Simpson Scale.

FIGURE 5.6: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF THE PEE DEE LUMBER REGION⁴

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³ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.

⁴ It should be noted that Hurricane Matthew in 2016 has been added to the hazard history, however the storm track is beyond the 75-mile radius shown on the map above. The storm track is southeast of the planning area just beyond the extent shown in the figure above. The decision was made not to pan out to show the storm track because it would then add multiple other events that were beyond the 75-mile target radius.



HURRICANE AND TROPICAL STORM TRACKS



 $Source: \ National\ Oceanic\ and\ Atmospheric\ Administration,\ National\ Hurricane\ Center$

TABLE 5.11: HISTORICAL STORM TRACKS WITHIN 75 MILES OF THE PEE DEE LUMBER REGION (1850–2020)

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
8/24/1851	NOTNAMED	58	Tropical Storm

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
10/10/1852	NOTNAMED	58	Tropical Storm
9/9/1854	NOTNAMED	69	Tropical Storm
9/1/1856	NOTNAMED	58	Tropical Storm
9/17/1859	NOTNAMED	46	Tropical Storm
6/22/1867	NOTNAMED	69	Tropical Storm
9/28/1874	NOTNAMED	92	Category 1
9/11/1883	NOTNAMED	104	Category 2
8/25/1885	NOTNAMED	104	Category 2
6/22/1886	NOTNAMED	46	Tropical Storm
7/1/1886	NOTNAMED	58	Tropical Storm
9/10/1888	NOTNAMED	40	Tropical Storm
9/24/1889	NOTNAMED	52	Tropical Storm
6/16/1893	NOTNAMED	58	Tropical Storm
8/28/1893	NOTNAMED	86	Category 1
10/13/1893	NOTNAMED	121	Category 3
9/27/1894	NOTNAMED	81	Category 1
10/9/1894	NOTNAMED	69	Tropical Storm
9/29/1896	NOTNAMED	98	Category 2
10/31/1899	NOTNAMED	109	Category 2
7/13/1901	NOTNAMED	40	Tropical Storm
6/15/1902	NOTNAMED	40	Tropical Storm
9/14/1904	NOTNAMED	81	Category 1
9/18/1906	NOTNAMED	69	Tropical Storm
9/3/1913	NOTNAMED	63	Tropical Storm
8/3/1915	NOTNAMED	40	Tropical Storm
5/16/1916	NOTNAMED	40	Tropical Storm
7/15/1916	NOTNAMED	58	Tropical Storm
9/23/1920	NOTNAMED	63	Tropical Storm
10/3/1927	NOTNAMED	46	Tropical Storm
9/18/1928	NOTNAMED	69	Tropical Storm
9/5/1935	NOTNAMED	63	Tropical Storm
8/2/1944	NOTNAMED	69	Tropical Storm
10/20/1944	NOTNAMED	46	Tropical Storm
9/18/1945	NOTNAMED	40	Tropical Storm
8/28/1949	NOTNAMED	46	Tropical Storm
8/31/1952	ABLE	81	Category 1
10/15/1954	HAZEL	127	Category 3
8/17/1955	DIANE	69	Tropical Storm
7/29/1960	BRENDA	52	Tropical Storm
9/13/1964	DORA	52	Tropical Storm
9/5/1979	DAVID	63	Tropical Storm

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
9/13/1984	DIANA	75	Category 1
7/25/1985	ВОВ	63	Tropical Storm
11/22/1985	KATE	58	Tropical Storm
8/28/1988	CHRIS	40	Tropical Storm
9/22/1989	HUGO	98	Category 2
7/20/1994	NOTNAMED	34	Tropical Depression
9/6/1996	FRAN	115	Category 3
7/24/1997	Danny	23	Tropical Depression
9/22/2000	Helene	29	Tropical Depression
6/13/2001	Allison	29	Tropical Depression
8/14/2004	Charley	69	Category 1
8/29/2004	GASTON	52	Tropical Storm
9/27/2004	Jeanna	34	Tropical Depression
9/6/2008	HANNA	69	Tropical Storm
5/30/2012	Beryl	44	Tropical Storm
6/7/2013	Andrea	46	Tropical Storm
5/11/2015	Ana	34	Tropical Depression
9/2/2016	Hermine	54	Tropical Storm
10/8/2016	Matthew	85	Category 1
9/15/2018	Florence	54	Tropical Storm
10/11/2018	Michael	51	Tropical Storm
5/27/2020	Bertha	34	Tropical Depression
8/4/2020	Isaias	64	Tropical Storm

Source: NOAA, Historical Storm Tracks National Hurricane Center

The National Centers for Environmental Information reported four events associated with a hurricane or tropical storm in the Pee Dee Lumber Region between 1950 and 2011. Federal records indicate that seven disaster declarations were made in the Pee Dee Lumber region in 1989 (Hurricane Hugo), 1996 (Hurricane Fran), 1999 (Hurricane Floyd), 2004 (Tropical Storm Frances), 2016 (Hurricane Matthew), 2018 (Hurricane Florence), and 2019 (Tropical Storm Michael)⁵.

Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding. Some anecdotal information was available for the major storms that have impacted that area as found below:

Hurricane Bertha – July 12, 1996

The center track of Bertha passed about 100 miles east of the Pee Dee Lumber Planning Area. However, it was large, so the outer bands impacted the area. No specific damage reports could be found for the region and the event did not result in a major disaster declaration for the area.

⁵ Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: Hazard Identification.

Hurricane Fran – September 5, 1996

This stormed pass east of the planning area but still resulting in some rainfall and wind in the area. Amounts between 0.5 inch and two inches were reported, but the most damaging impacts were from winds. A disaster declaration was declared in each of the four participating counties which included the jurisdictions within.

Hurricane Dennis - September 4, 1999

No specific damage reports could be found for the region and the event did not result in a major disaster declaration for the area.

Hurricane Floyd – September 15, 1999

Floyd produced rainfall amounts between two and five inches in the Pee Dee Lumber Regional planning area. Rainfall amounts were greatest in Scotland County. A disaster declaration was declared in each of the four participating counties which included the jurisdictions within.

Tropical Storm Frances – September 7-8, 2004

Tropical Storm Frances was a slow-moving, relatively large storm that dumped heavy rains over the eastern United States. Frances passed well west of the Pee Dee Lumber Region and caused significant damage in the North Carolina mountains. Only Scotland County received a disaster declaration for this storm.

Tropical Storm Hermine – September 2, 2016

Tropical Storm Hermine tracked along the Southeast United States coastline and across coastal portions of the Carolina's. It produced heavy rain across portions of central North Carolina. Given the heavy rain and gusty winds associated with Hermine there were numerous reports of trees downed and wind damage and resultant power outages throughout the Pee Dee Lumber region.

Hurricane Matthew - October 8, 2016

Matthew was a slow-moving, large storm that produced around 20 inches of rain in North Carolina. The storm hit Central and Eastern North Carolina causing massive flooding. Flooding continued east for days after the storm hit. The Neuse and Tar rivers were still rising on October 12th before they hit peek flooding as much as five days after the storm. All four counties were included in the Presidential Disaster Declaration.

Hurricane Florence – September 13, 2018

By the time Hurricane Florence struck the Pee Dee Lumber region, it had been reduced from a Category 1 Hurricane when it hit the North Carolina coast, to a tropical storm. Still, frequent wind gusts of 40 to 60 mph resulted in numerous trees down across the Pee Dee Lumber region, including on homes, cars, power lines, and damage to structures. Numerous customers lost power in every county in the region as a result of the tropical storm force winds. The National Center for Environmental Information reported that damages to the Pee Dee Lumber region totaled to \$3 million in property damages.

Tropical Storm Michael - October 11, 2018

Tropical Storm Michael moved through North Carolina on Thursday, October 11th. Michael brought heavy rain and strong damaging winds to central North Carolina. While heavy rainfall of 3 to 5 inches produced minor flash flooding across the area, it was high wind gusts of 40 to 60 mph that caused the

biggest problems, knocking down scores of trees, leading to block roadways and thousands without power. Tropical storm wind gusts downed trees and caused minor wind damage across the Pee Dee Lumber region. Only Montgomery County had a declared disaster, but, according to the National Centers for Environmental Information there was about \$175 thousand in damages across the region.

5.5.4 Probability of Future Occurrences

Given the inland location of the region, it is more likely to be affected by remnants of hurricane and tropical storm systems (as opposed to a major hurricane) which may result in flooding or high winds. Probability of being impacted is less than coastal areas, but still remains a real threat to the Pee Dee Lumber Region. Based on historical evidence, the probability level of future occurrence is highly likely (annual probability of 100 percent).

5.6 TORNADOES/THUNDERSTORMS

For the purposes of maintaining consistency with the State of North Carolina Hazard Mitigation Plan, this section will assess tornadoes and thunderstorms, which also includes high winds, hailstorms, and lightning.

5.6.1 Background and Description

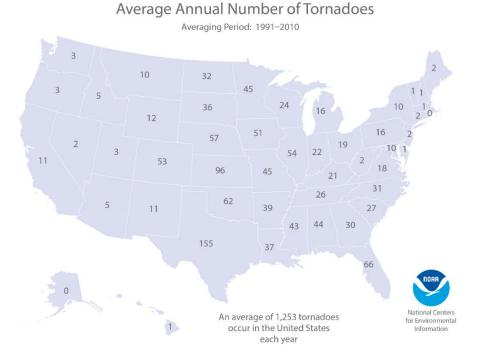
Tornadoes

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 (but sometimes result from hurricanes and other tropical storms) when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. 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 miles per hour 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. Each year, an average of over 800 tornadoes is reported nationwide, resulting in an average of 80 deaths and 1,500 injuries⁶. According to the NOAA Storm Prediction Center (SPC), the highest concentration of tornadoes in the United States has been in Oklahoma, Texas, Kansas, and Florida respectively. Although the Great Plains region of the Central United States does favor the development of the largest and most dangerous tornadoes (earning the designation of "tornado alley"), Florida experiences the greatest number of tornadoes per square mile of all U.S. states (SPC, 2002). Figure 5.7 shows tornado activity in the United States based on the number of recorded tornadoes per 1,000 square miles.

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⁶ NOAA, 2013

FIGURE 5.7: TORNADO ACTIVITY IN THE UNITED STATES



Tornadoes are more likely to occur during the months of March through May and are most 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.

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 damage to structures of light construction, including residential dwellings (particularly mobile homes). Tornadic magnitude is reported according to the Fujita and Enhanced Fujita Scales. Tornado magnitudes prior to 2005 were determined using the traditional version of the Fujita Scale (**Table 5.12**). Tornado magnitudes that were determined in 2005 and later were determined using the Enhanced Fujita Scale (**Table 5.13**).

TABLE 5.12: THE FUJITA SCALE (EFFECTIVE PRIOR TO 2005)

F-Scale Number	Intensity Phrase	Wind Speed	Type of Damage Done			
F0	Gale tornado	40-72 mph	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.			
F1	Moderate tornado	73-112 mph	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.			

F2	Significant tornado	113-157 mph	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	Severe tornado	158-206 mph	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted
F4	Devastating tornado	207-260 mph	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	Incredible tornado	261-318 mph	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.
F6	Inconceivable tornado	319-379 mph	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage. If this level is ever achieved, evidence for it might only be found in some manner of ground swirl pattern, for it may never be identifiable through engineering studies

Source: National Weather Service

TABLE 5.13 THE ENHANCED FUJITA SCALE (EFFECTIVE 2005 AND LATER)

EF-Scale	Intensity	3 Second Gust	Type of Damage Done
Number	Phrase	(MPH)	Type of Dainage Done
0	Gale	65-85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards.
1	Moderate	86-110	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
2	Significant	111-135	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
3	Severe	136-165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
4	Devastating	166-200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
5	Incredible	Over 200	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.

Source: National Weather Service

Thunderstorms

Thunderstorms can produce a variety of accompanying hazards including wind (discussed here), hail, and lightning⁷. Although thunderstorms generally affect a small area, they are very dangerous may cause substantial property damage.

Three conditions need to occur for a thunderstorm to form. First, it needs moisture to form clouds and rain. Second, it needs unstable air, such as warm air that can rise rapidly (this often referred to as the "engine" of the storm). Third, thunderstorms need lift, which comes in the form of cold or warm fronts, sea breezes, mountains, or the sun's heat. When these conditions occur simultaneously, air masses of varying temperatures meet, and a thunderstorm is formed. These storm events can occur singularly, in lines, or in clusters. Furthermore, they can move through an area very quickly or linger for several hours.

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." A thunderstorm becomes "severe" occurs when the storm produces at least one of these three elements: 1) hail of three-quarters of an inch, 2) a tornado, or 3) winds of at least 58 miles per hour.

Thunderstorm events have the capability of producing straight-line winds that can cause severe

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⁷ Lightning and hail hazards are discussed as separate hazards in this section.

destruction to communities and threaten the safety of a population. Such wind events, sometimes separate from a thunderstorm event, are possible throughout the Pee Dee Lumber Region. A specific type of straight-line wind, called a downburst, is also discussed here.

Downbursts are also possible with thunderstorm events. Such events are an excessive burst of wind in excess of 125 miles per hour. They are often confused with tornadoes. Conversely to tornadoes, where wind flows inward, downburst wind flows outward, often resulting in straight-line winds. Downbursts are caused by down drafts from the base of a convective thunderstorm cloud. It occurs when raincooled air within the cloud becomes heavier than its surroundings. Thus, air rushes towards the ground in a destructive yet isolated manner. There are two types of downbursts. Downbursts less than 2.5 miles wide, duration less than 5 minutes, and winds up to 168 miles per hour are called "microbursts." Larger events greater than 2.5 miles at the surface and longer than 5 minutes with winds up to 130 miles per hour are referred to as "macrobursts."

Hailstorms

Hailstorms are a potentially damaging outgrowth of severe thunderstorms (thunderstorms are discussed separately in Section 5.8). Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until they develop to a sufficient weight and fall as precipitation. Hail typically takes the form of spheres or irregularly-shaped masses greater than 0.75 inches in diameter. The size of hailstones is a direct function of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth's surface. Higher temperature gradients relative to elevation above the surface result in increased suspension time and hailstone size. **Table 5.14** shows the TORRO Hailstorm Intensity Scale which is a way of measuring hail severity.

Table 5.14: TORRO HAILSTORM INTENSITY SCALE

	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m²	mm to inch conversion (inches)	Typical Damage Impacts
но	Hard Hail	5	0-20	0-0.2	No damage
H1	Potentially Damaging	5- 15	>20	0.2 – 0.6	Slight general damage to plants, crops
H2	Significant	10- 20	>100	0.4 – 0.8	Significant damage to fruit, crops, vegetation
НЗ	Severe	20 -30	>300	0.8 – 1.2	Severe damage to crops, damage to glass and plastic structures, paint and wood scored
Н4	Severe	25- 40	>500	1.0 – 1.6	Widespread glass damage, vehicle bodywork damage
Н5	Destructive	30 -50	>800	1.2 – 2.0	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
Н6	Destructive	40- 60		1.6 – 2.4	Bodywork of grounded aircraft dented; brick walls pitted
H7	Destructive	50- 75		2.0 – 3.0	Severe roof damage, risk of serious injuries
Н8	Destructive	60- 90		1.6 – 3.5	(Severest recorded in the British Isles) Severe damage to aircraft bodywork

	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m²	mm to inch conversion (inches)	Typical Damage Impacts
Н9	Super Hailstorms	75- 100		3.0 – 3.9	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100			Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Source: http://www.torro.org.uk/site/hscale.php

Lightning

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 the thunder which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning may also strike outside of heavy rain and might occur as far as 10 miles away from any rainfall.

Lightning strikes occur in very small, localized areas. For example, they may strike a building, electrical transformer, or even a person. According to FEMA, lightning injures an average of 300 people and kills 80 people each year in the United States. Direct lightning strikes also have the ability to cause significant damage to buildings, critical facilities, and infrastructure largely by igniting a fire. Lightning is also responsible for igniting wildfires that can result in widespread damages to property.

Figure 5.8 shows a lightning flash density map for the years 1996-2000 based upon data provided by Vaisala's U.S. National Lightning Detection Network (NLDN°).

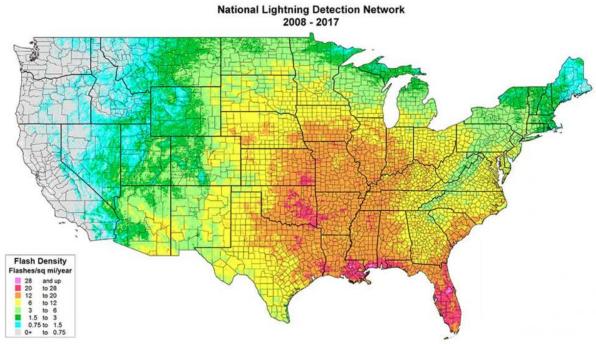


Figure 5.8: LIGHTNING FLASH DENSITY IN THE UNITED STATES

Source: Vaisala U.S. National Lightning Detection Network

5.6.2 Location and Spatial Extent

Tornadoes

Tornadoes occur throughout the state of North Carolina, and thus the Pee Dee Lumber Region. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that the Pee Dee Lumber Region is uniformly exposed to this hazard.

Thunderstorms

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, the Pee Dee Lumber Region typically experiences occasional straight-line wind events. These wind events can and have caused significant damage. It is assumed that the Pee Dee Lumber Region has uniform exposure to a hazard and the spatial extent of an impact could be large.

Hailstorms

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that the Pee Dee Lumber Region is uniformly exposed to severe thunderstorms; therefore, all areas of the region are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of the Pee Dee Lumber Region is uniformly exposed to lightning.

5.6.3 Historical Occurrences

Tornadoes

According to the National Centers for Environmental Information, there have been a total of 28 recorded tornado events in the Pee Dee Lumber Region since 1950 (**Table 5.15**), resulting in over \$15 million (2020 dollars) in property damages⁸. In addition, thirty-six injuries were reported (**Table 5.15**). The magnitude of these tornados' ranges from F1 to F4 in intensity, although an F5 event is possible. It is important to note that only tornadoes that have been reported are factored into this risk assessment. It is likely that a high number of occurrences have gone unreported over the past 62 years.

TABLE 5.15: SUMMARY OF TORNADO OCCURRENCES IN THE PEE DEE LUMBER REGION

TABLE 5.15. SOM		COTTILL TOLD III	THE TEE DEE COMBER REGION		
Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)	
Anson County	6	0	5	\$6,125,000	
Ansonville	0	0	0	\$0	
Lilesville	0	0	0	\$0	
McFarlen	0	0	0	\$0	
Morven	0	0	0	\$0	
Peachland	0	0	0	\$0	
Polkton	0	0	0	\$0	
Wadesboro	1	0	0	\$0	
Unincorporated Area	5	0	5	\$6,125,000	
Montgomery County	7	0	7	\$2,777,500	
Biscoe	0	0	0	\$0	
Candor	0	0	0	\$0	
Mount Gilead	0	0	0	\$0	
Star	1	0	0	\$0	
Troy	0	0	0	\$0	
Unincorporated Area	6	0	7	\$2,777,500	
Richmond County	4	0	0	\$350,030	
Dobbins Heights	0	0	0	\$0	
Ellerbe	0	0	0	\$0	
Hamlet	0	0	0	\$0	
Hoffman	0	0	0	\$0	
Norman	0	0	0	\$0	
Rockingham	0	0	0	\$0	
Unincorporated Area	4	0	0	\$350,030	
Scotland County	11	0	24	\$6,275,250	

⁸ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in the Pee Dee Lumber Region. As additional local data becomes available, this hazard profile will be amended.

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
East Laurinburg	0	0	0	\$0
Gibson	0	0	0	\$0
Laurinburg	1	0	0	\$0
Wagram	0	0	0	\$0
Unincorporated Area	10	0	24	\$6,275,250
Pee Dee Lumber Regional Total	28	0	36	\$15,527,780

Thunderstorms

Severe storms resulted in one disaster declaration in the Pee Dee Lumber Region in 1984⁹. According to NCEI, there have been 530 reported thunderstorm/high wind events since 1950 in the Pee Dee Lumber Region¹⁰. These events caused almost \$4.4 million in damages (2012 dollars). There were reports of two injuries and one fatality. **Table 5.16** summarize this information.

TABLE 5.16: SUMMARY OF THUNDERSTORM WIND OCCURRENCES IN THE PEE DEE LUMBER REGION

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	159	1	2	\$206,800
Ansonville	14	0	0	\$7,500
Lilesville	4	0	0	\$7,500
McFarlen	3	0	0	\$10,000
Morven	5	0	0	\$0
Peachland	15	0	0	\$52,000
Polkton	10	0	0	\$2,000
Wadesboro	31	0	0	\$65,000
Unincorporated Area	128	1	2	\$62,800
Montgomery County	124	0	0	\$2,455,500
Biscoe	7	0	0	\$18,000
Candor	7	0	0	\$15,000
Mount Gilead	17	0	0	\$0
Star	5	0	0	\$17,500
Troy	24	0	0	\$152,000
Unincorporated Area	64	0	0	\$2,253,000
Richmond County	132	0	0	\$600,000
Dobbins Heights	0	0	0	\$0
Ellerbe	21	0	0	\$2,000
Hamlet	7	0	0	\$282,500

⁹ Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: *Hazard Identification*.

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¹⁰ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional thunderstorm events have occurred in the Pee Dee Lumber Region. As additional local data becomes available, this hazard profile will be amended.

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Hoffman	4	0	0	\$0
Norman	1	0	0	\$0
Rockingham	24	0	0	\$82,500
Unincorporated Area	75	0	0	\$233,000
Scotland County	115	0	4	\$1,187,500
East Laurinburg	2	0	0	\$0
Gibson	6	0	0	\$5,000
Laurinburg	21	0	0	\$92,500
Wagram	8	0	0	\$8,000
Unincorporated Area	78	0	4	\$1,082,000
Pee Dee Lumber Regional Total	530	1	6	\$4,449,800

Source: National Centers for Environmental Information

December 25, 2002

A windstorm reaching 80 miles per hour impacted the region, disrupting power across the region for up to three days.

May 15, 2012

During the Hazard Mitigation Strategy meeting, the local project point of contact (and Richmond County Emergency Manager) had to leave to the meeting to assess a wind event situation. Some houses had experienced damaged and many trees were down. It was thought to be the result of straight-line winds.

Hailstorms

According to the National Centers for Environmental Information, 183 recorded hailstorm events have affected the Pee Dee Lumber Region since 1969¹¹. **Table 5.17** is a summary of the hail events in the Pee Dee Lumber Region. Hail can occur anywhere. Hail occurrences resulted in nearly \$5.27 million in property damages (2020 dollars) in the region, most of which were reported in Scotland County. Hail ranged in diameter from 0.75 inches to 4.5 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Furthermore, high losses in Scotland County indicate that neighboring counties may also be subject to additional, unreported losses. Therefore, it is likely that damages are greater than the reported value. Additionally, a single storm event may have affected multiple counties.

¹¹ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected the Pee Dee Lumber Region. In addition to NCEI, the North Carolina Department of Insurance office was contacted for information. As additional local data becomes available, this hazard profile will be amended.

TABLE 5.17: SUMMARY OF HAIL OCCURRENCES IN THE PEE DEE LUMBER REGION

	ART OF HAIL OCCURRED	1020 111 1112		
Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	49	0	0	\$0
Ansonville	9	0	0	\$0
Lilesville	2	0	0	\$0
McFarlen	0	0	0	\$0
Morven	2	0	0	\$0
Peachland	0	0	0	\$0
Polkton	2	0	0	\$0
Wadesboro	9	0	0	\$0
Unincorporated Area	25	0	0	\$0
Montgomery County	53	0	0	\$25,000
Biscoe	2	0	0	\$0
Candor	4	0	0	\$0
Mount Gilead	3	0	0	\$0
Star	1	0	0	\$0
Troy	13	0	0	\$25,000
Unincorporated Area	30	0	0	\$0
Richmond County	35	0	0	\$250,000
Dobbins Heights	0	0	0	\$0
Ellerbe	1	0	0	\$0
Hamlet	2	0	0	\$0
Hoffman	2	0	0	\$250,000
Norman	2	0	0	\$0
Rockingham	12	0	0	\$0
Unincorporated Area	16	0	0	\$0
Scotland County	46	0	0	\$5,000,000
East Laurinburg	2	0	0	\$0
Gibson	2	0	0	\$0
Laurinburg	17	0	0	\$0
Wagram	2	0	0	\$0
Unincorporated Area	23	0	0	\$5,000,000
Pee Dee Lumber Regional Total	183	0	0	\$5,275,000

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there have been a total of 7 recorded

lightning events in the Pee Dee Lumber Region since 1950¹². These events resulted in \$300 thousand (2020 dollars) in damages, as listed in summary **Table 5.18**. Furthermore, lightning has caused seven injuries in the Pee Dee Lumber Region.

It is certain that more than 7 events have impacted the region. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported.

TABLE 5.18: SUMMARY OF LIGHTNING OCCURRENCES IN THE PEE DEE LUMBER REGION

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	2	0	0	\$85,000
Ansonville	0	0	0	\$0
Lilesville	0	0	0	\$0
McFarlen	1	0	0	\$75,000
Morven	0	0	0	\$0
Peachland	0	0	0	\$0
Polkton	0	0	0	\$0
Wadesboro	0	0	0	\$0
Unincorporated Area	1	0	0	\$10,000
Montgomery County	3	0	0	\$10,000
Biscoe	0	0	0	\$0
Candor	0	0	0	\$0
Mount Gilead	2	0	0	\$10,000
Star	0	0	0	\$0
Troy	1	0	0	\$0
Unincorporated Area	0	0	0	\$0
Richmond County	0	0	0	\$0
Dobbins Heights	0	0	0	0
Ellerbe	0	0	0	0
Hamlet	0	0	0	0
Hoffman	0	0	0	0
Norman	0	0	0	0
Rockingham	0	0	0	0
Unincorporated Area	0	0	0	0
Scotland County	2	0	0	\$205,000
East Laurinburg	1	0	0	\$200,000

¹² These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional lightning events have occurred in the Pee Dee Lumber Region. The State Fire Marshall's office was also contacted for additional information but none could be provided. As additional local data becomes available, this hazard profile will be amended.

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Gibson	0	0	0	\$0
Laurinburg	0	0	0	\$0
Wagram	0	0	0	\$0
Unincorporated Area	1	0	0	\$5,000
Pee Dee Lumber Regional Total	7	0	0	\$300,000

Source: National Centers for Environmental Information

5.6.4 Probability of Future Occurrences

Tornadoes

According to historical information, tornado events are not typically an annual occurrence for the region. However, conditions in the area are favorable for tornado development, particularly in the spring and fall months. While the majority of the reported tornado events are small in terms of size, intensity, and duration, they do pose a significant threat should the Pee Dee Lumber Region experience a direct tornado strike. Based on historical occurrences and typical atmospheric conditions, the probability of future tornado occurrences affecting the Pee Dee Lumber Region is likely (10-100 percent annual probability).

Thunderstorms

Given the high number of previous events, it is certain that thunderstorm events will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for the entire planning area.

Hailstorms

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 - 100 percent annual probability). Since hail is an atmospheric hazard, it is assumed that the entire Pee Dee Lumber Region has equal exposure and future probability of this hazard occurring. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the region.

Lightning

Although there was not a high number of historical lightning events reported throughout the Pee Dee Lumber Region via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN®), the Pee Dee Lumber Region is located in an area of the country that experienced an average of 4 to 6 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the region.

5.7 SEVERE WINTER WEATHER

5.7.1 Background and Description

Severe winter weather 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. Events may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Some winter storms might be large enough

to affect several states, while others might affect only localized areas. Occasionally, heavy snow might also cause significant property damages, such as roof collapses on older buildings.

All winter storm events have the potential to present dangerous conditions to the affected area. Larger snowfalls pose a greater risk, reducing visibility due to blowing snow and making driving conditions treacherous. A heavy snow event is defined by the National Weather Service as an accumulation of 4 of more inches in 12 hours or less. A blizzard is the most severe form of winter storm. It combines low temperatures, heavy snow, and winds of 35 miles per hour or more, which reduces visibility to a quarter mile or less for at least 3 hours. Winter storms are often accompanied by sleet, freezing rain, or an ice storm. Such freeze events are particularly hazardous as they create treacherous surfaces.

Ice storms are defined as storms with significant amounts of freezing rain and are a result of cold air damming (CAD). CAD is a shallow, surface-based layer of relatively cold, stably-stratified air entrenched against the eastern slopes of the Appalachian Mountains. With warmer air above, falling precipitation in the form of snow melts, then becomes either super-cooled (liquid below the melting point of water) or re-freezes. In the former case, super-cooled droplets can freeze on impact (freezing rain), while in the latter case, the re-frozen water particles are ice pellets (or sleet). Sleet is defined as partially frozen raindrops or refrozen snowflakes that form into small ice pellets before reaching the ground. They typically bounce when they hit the ground and do not stick to the surface. However, it does accumulate like snow, posing similar problems and has the potential to accumulate into a layer of ice on surfaces. Freezing rain, conversely, usually sticks to the ground, creating a sheet of ice on the roadways and other surfaces. All of the winter storm elements – snow, low temperatures, sleet, ice, et cetera – have the potential to cause significant hazard to a community. Even small accumulations can down power lines and trees limbs and create hazardous driving conditions. Furthermore, communication and power may be disrupted for days.

5.7.2 Location and Spatial Extent

Nearly the entire continental United States is susceptible to severe winter weather events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Winter storm events have the potential to impact the entire Pee Dee Lumber Region and each participating area has equal exposure to its occurrence.

5.7.3 Historical Occurrences

Winter weather has resulted in four disaster declarations in the Pee Dee Lumber Region. This includes the Blizzard of 1996, a subsequent 1996 winter storm, a severe winter storm in 2000, and a severe ice storm in 2002¹³. According to the National Centers for Environmental Information, there have been a total of 140 recorded winter storm events in the Pee Dee Lumber Region since 1993 (**Table 5.19**)¹⁴.

¹³ Not all of the participating counties were declared disaster areas for these events. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: *Hazard Identification*.

¹⁴ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional winter storm conditions have affected the Pee Dee Lumber. In addition, the 87 events are reported by county, so many of these storms likely affected all of the counties. The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for each county.

TABLE 5.19: SUMMARY OF WINTER STORM EVENTS IN THE PEE DEE LUMBER REGION

Location	Number of Occurrences	Deaths/Injuries	Property Damage (2020)
Anson County	32	0/0	\$0
Montgomery County	41	0/0	\$0
Richmond County	35	0/0	\$0
Scotland County	32	0/0	\$0
PEE DEE LUMBER REGION TOTAL	140	0/0	\$0

Source: National Centers for Environmental Information

There have been several severe winter weather events in the Pee Dee Lumber Region. **Appendix H** includes descriptions of recent winter storm events.

This area does not receive snow or ice storms annually on a regular basis. Conversely, some winter seasons may yield several snowfall events. The winter of 2002-2003 saw as many as five winter storm events in the Region. The Pee Dee Lumber Region also varies in the amount of snow it may receive. For example, Montgomery County has snow accumulations ranging from one inch to twenty-five inches. As with all hazards, not all events may be reported. Notable years of snow for the region include the 2010 (Christmas Snow), 2000, and 1996 (Blizzard of 1996 -disaster declaration in Montgomery County).

5.7.4 Probability of Future Occurrences

Winter storm events will continue to impact the Pee Dee Lumber Region though not necessary each year and with varying degrees of severity. According to recorded historical information, the Pee Dee Lumber Region experiences an average of 1.3 winter storm events each year. Therefore, the annual probability is likely (10-100 percent).

5.8 EARTHQUAKES

5.8.1 Background and Description

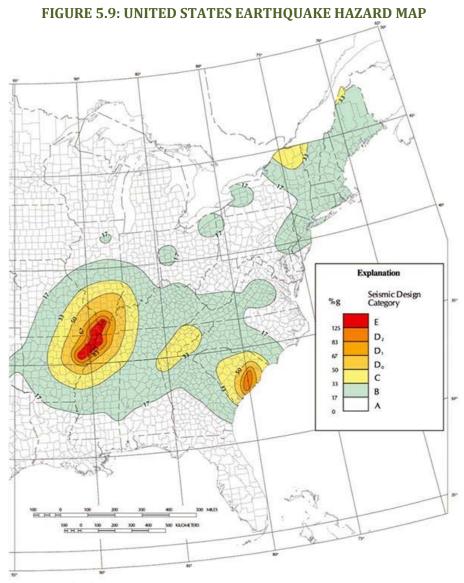
An earthquake is movement or trembling of the ground produced by sudden displacement of rock in the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of caverns. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured 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 10 tectonic plates. The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. Deformation along plate boundaries causes strain in the rock and the consequent buildup of stored energy. When the built-up stress exceeds the rocks' strength a rupture occurs. The rock on both sides of the fracture is snapped, releasing the stored energy and producing seismic waves, generating an earthquake.

The greatest earthquake threat in the United States is along tectonic plate boundaries and seismic fault lines located in the central and western states; however, the Eastern United State does face moderate risk to less frequent, less intense earthquake events. **Figure 5.9** shows relative seismic risk for the United States.



Source: Federal Emergency Management Agency

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 (**Table 5.20**). Each unit increase in magnitude on the Richter Scale corresponds to a 10-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, ranging from "I" corresponding to imperceptible (instrumental) events 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 5.21**.

TABLE 5.20: RICHTER SCALE

RICHTER MAGNITUDES	EARTHQUAKE EFFECTS
< 3.5	Generally not felt, but recorded.
3.5 - 5.4	Often felt, but rarely causes damage.
5.4 - 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 >	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Source: Federal Emergency Management Agency

TABLE 5.21: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
1	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
х	DISASTROUS	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread.	< 7.3
хі	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: Federal Emergency Management Agency

5.8.2 Location and Spatial Extent

Approximately two-thirds of North Carolina is subject to earthquakes, with the western and southeast region most vulnerable to a very damaging earthquake. The entire Pee Dee Lumber Region could be impacted by an earthquake, though damage is unlikely. The state is affected by both the Charleston Fault in South Carolina and New Madrid Fault in Tennessee. Both of these faults have generated earthquakes measuring greater than 8 on the Richter Scale during the last 200 years. In addition, there are several smaller fault lines throughout North Carolina. **Figure 5.10** is a map showing geological and seismic information for North Carolina.

Seismic Hazard Map for North Carolina

Peak acceleration expressed as a percent of gravity

% Gravity

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FIGURE 5.10: GEOLOGICAL AND SEISMIC INFORMATION FOR NORTH CAROLINA

Source: North Carolina Geological Survey

Figure 5.11 shows the intensity level associated with the Pee Dee Lumber Region, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, all of the Pee Dee Lumber Region lies within an approximate zone of level "3" to "4" ground acceleration. This indicates that the region as a whole exists within an area of moderate seismic risk.

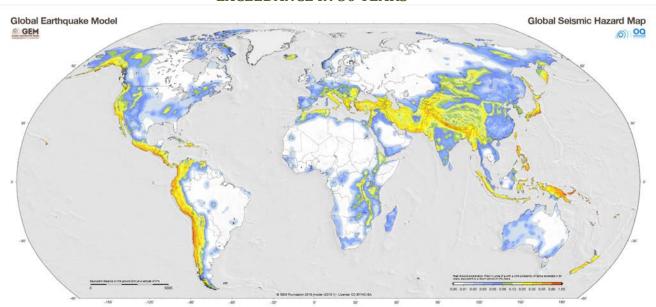


FIGURE 5.11: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: Global Earthquake Model, 2018

5.8 3 Historical Occurrences

At least 21 earthquakes are known to have affected the Pee Dee Lumber Region since 1886. The strongest of these measured a VII on the Modified Mercalli Intensity (MMI) scale. **Table 5.22** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985. **Table 5.23** presents a detailed occurrence of each event including the date, distance for the epicenter, and Modified Mercalli Intensity (if known)¹⁵.

TABLE 5.22: SUMMARY OF SEISMIC ACTIVITY IN THE PEE DEE LUMBER REGION

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Anson County	11	VI (strong)	<5.4
Ansonville	1	VI	
Lilesville	1	III	
McFarlen	1	IV	
Morven	1	IV	
Peachland	0		
Polkton	0		
Wadesboro	1	V	
Unincorporated Area	6		
Montgomery County	2	VII (very strong)	<6.1
Biscoe	0		

¹⁵ Due to reporting mechanisms, not all earthquakes events were recorded during this time. Furthermore, some are missing data, such as the epicenter location, due to a lack of widely used technology. In these instances, a value of "unknown" is reported.

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Candor	0		
Mount Gilead	0		
Star	0		
Troy	1	VII	
Unincorporated Area	1		
Richmond County	5	V (slightly strong)	<4.8
Dobbins Heights	0		
Ellerbe	2	IV	
Hamlet	1	IV	
Hoffman	0		
Norman	0		
Rockingham	1	V	
Unincorporated Area	0		
Scotland County	3	VI (strong)	<5.4
East Laurinburg	0		
Gibson	2	III	
Laurinburg	1	VI	
Wagram	0		
Unincorporated Area	0		
Pee Dee Lumber Regional Total	21	VII	<6.1

Source: National Geophysical Data Center

The most recent earthquake event to directly affect North Carolina was the 2020 Sparta earthquake. A narrative discussion about this earthquake can be found below.

- Sparta Earthquake (August 9, 2020)

According to the National Weather Service, the 5.2 magnitude earthquake was the second strongest earthquake to occur in North Carolina since 1900. There were no immediate reports of injuries from this earthquake. Before the 5.1 earthquake, five other minor earthquakes were measured in the area. Although there were no reports of injuries or deaths associated with the earthquake, there was extensive property damage reported across in Sparta and across Alleghany County. Over 525 damage reports were filed with Alleghany County officials. People felt the effects of the earthquake across the Carolinas, in Virginia, Georgia and Tennessee.

In addition to those earthquakes specifically affecting the Pee Dee Lumber Region, a list of earthquakes that have caused damage throughout North Carolina is presented below in **Table 5.23**.

TABLE 5.23: EARTHQUAKES WHICH HAVE CAUSED DAMAGE IN NORTH CAROLINA

Date	Location	Richter Scale (Magnitude)	MMI (Intensity)	MMI in North Carolina
12/16/1811 - 2	NE Arkansas	8.0	X	VI
12/18/1811 - 3	NE Arkansas	8.0	Χ	VI
01/23/1812	New Madrid, MO	8.4	XI	VI
02/071812	New Madrid, MO	8.7	XII	VI
04/29/1852	Wytheville, VA	5.0	VI	VI
08/31/1861	Wilkesboro, NC	5.1	VII	VII
12/23/1875	Central Virginia	5.0	VII	VI
08/31/1886	Charleston, SC	7.3	Χ	VII
05/31/1897	Giles County, VA	5.8	VIII	VI
01/01/1913	Union County, SC	4.8	VII	VI
02/21/1916	Asheville, NC	5.5	VII	VII
07/08/1926	Mitchell County, NC	5.2	VII	VII
11/03/1928	Newport, TN	4.5	VI	VI
05/13/1957	McDowell County, NC	4.1	VI	VI
07/02/1957	Buncombe County, NC	3.7	VI	VI
11/24/1957	Jackson County, NC	4.0	VI	VI
10/27/1959 *†	Chesterfield, SC	4.0	VI	VI
07/13/1971	Newry, SC	3.8	VI	VI
11/30/1973	Alcoa, TN	4.6	VI	VI
11/13/1976	Southwest Virginia	4.1	VI	VI
05/05/1981	Henderson County, NC	3.5	VI	VI
08/09/2020	Sparta, NC	5.1	VII	VII

^{*}This event is accounted for in the Pee Dee Lumber occurrences.

Source: This information compiled by Dr. Kenneth B. Taylor and provided by Tiawana Ramsey of NCEM. Information was compiled from the National Earthquake Center, Earthquakes of the US by Carl von Hake (1983), and a compilation of newspaper reports in the Eastern Tennessee Seismic Zone compiled by Arch Johnston, CERI, Memphis State University (1983).

5.8.4 Probability of Future Occurrences

The probability of significant, damaging earthquake events affecting the Pee Dee Lumber is unlikely. However, it is likely that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the region. The annual probability level for the region is possible (between 1 and 10 percent).

[†]Conflicting reports on this event, intensity in North Carolina could have been either V or VI

5.9 Geological

For the purposes of maintaining consistency with the State of North Carolina Hazard Mitigation Plan, this section will assess geological hazards which include landslides, sinkholes, and erosion.

5.9.1 Background

Landslides

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.

According to the United States Geological Survey, each year landslides cause \$5.1 billion (2009 dollars) in damage and between 25 and 50 deaths in the United States¹⁶. **Figure 5.12** delineates areas where

¹⁶ United States Geological Survey (USGS). United States Department of the Interior. "Landslide Hazards –

large numbers of landslides have occurred and areas that are susceptible to land sliding in the conterminous United States¹⁷.

Low Incidence

Moderate Susceptability/Low incidence

Moderate Indidence

High suseptability/Low incidence

High Incidence

High Susceptability/Moderate Incidence

FIGURE 5.12: LANDSLIDE OVERVIEW MAP OF THE CONTERMINOUS UNITED STATES¹⁸
Source: USGS

Sinkholes

According to the United States Geological Survey, a sinkhole is an area of ground that has no natural external surface drainage--when it rains, all of the water stays inside the sinkhole and typically drains into the subsurface. Sinkholes can vary from a few feet to hundreds of acres and from less than 1 to more than 100 feet deep. Some are shaped like shallow bowls or saucers whereas others have vertical walls.

Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds, or

A National Threat." 2005.

¹⁷ This map layer is provided in the U.S. Geological Survey Professional Paper 1183, Landslide Overview Map of the Conterminous United States, available online at: http://landslides.usgs.gov/html_files/landslides/nationalmap/national.html.

¹⁸ Susceptibility not indicated where same or lower than incidence. Susceptibility to land sliding was defined as the probable degree of response of [the areal] rocks and soils to natural or artificial cutting or loading of slopes, or to anomalously high precipitation. High, moderate, and low susceptibility are delimited by the same percentages used in classifying the incidence of land sliding. Some generalization was necessary at this scale, and several small areas of high incidence and susceptibility were slightly exaggerated.

rocks that can naturally be dissolved by groundwater circulating through them. As the rock dissolves, spaces and caverns develop underground. Sinkholes are dramatic because the land usually stays intact for a while until the underground spaces just 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. These collapses can be small, or, as **Figure 5.13** below shows, they can be huge and can occur where a house or road is on top¹⁹.



FIGURE 5.13: SINKHOLE IN NORTH CAROLINA

Source: NCEM

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 becomes 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. Major storms, such hurricanes in coastal areas, may cause significant erosion by combining high winds with heavy surf and storm surge to significantly impact the shoreline. An area's potential for erosion is determined by four factors: soil characteristics, vegetative cover, topography climate or rainfall, and topography. Soils composed of a large percentage of silt and fine sand are most susceptible to erosion. As the clay and organic content of these soils increases, 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

¹⁹ Sinkholes. United States Geological Survey. Retrieved on December 14, 2017 from: https://water.usgs.gov/edu/sinkholes.html

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.

During the past 20 years, the importance of erosion control has gained the increased attention of the public. Implementation of erosion control measures consistent with sound agricultural and construction operations is needed to minimize the adverse effects associated with harmful chemicals run-off due to wind or water events. The increase in government regulatory programs and public concern has resulted in a wide range of erosion control products, techniques, and analytical methodologies in the United States. The preferred method of erosion control in recent years has been the restoration of vegetation.

5.9.2 Location and Spatial Extent

Landslides

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain throughout the Appalachian Mountain region). Human development can also exacerbate risk by building on previously undevelopable steep slopes and constructing roads by cutting through mountains.

According to **Figure 5.14** below, the greatest landside activity occurs in the northwestern corner of the region, including parts of Anson County and Montgomery County. The remainder of the region has a low incidence occurrence rate; however, the northwestern half has moderate susceptibility to landslides. This also indicates that landslides are possible throughout the Pee Dee Lumber Region. However, areas with steep slopes are more susceptible to this hazard. Historical occurrence information and generally flat topography indicate very little land sliding activity.

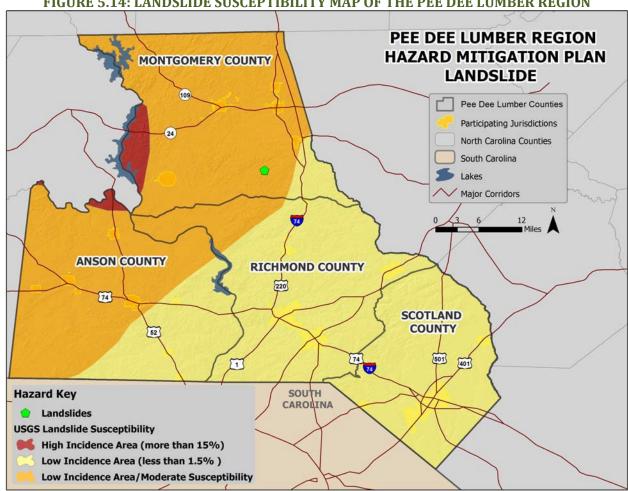


FIGURE 5.14: LANDSLIDE SUSCEPTIBILITY MAP OF THE PEE DEE LUMBER REGION

Source: Susceptibility – USGS; historical occurrence – North Carolina Geological Survey

Sinkholes

Figure 5.15 below shows areas of the United States where certain rock types that are susceptible to dissolution in water occur. In these areas, the formation of underground cavities can form and catastrophic sinkholes can happen. These rock types are evaporites (salt, gypsum, and anhydrite) and carbonates (limestone and dolomite). Evaporite rocks underlie about 35 to 40 percent of the United States, though in many areas they are buried at great depths. In some cases, sinkholes in North Carolina have been measured at up to 20 to 25 feet in depth, with similar widths. According to FEMA, the number of humans-induced sinkholes has doubled since 1930 and insurance claims for damages as a result of sinkholes has increased 1,200 percent from 1987 to 1991, costing nearly \$100 million. Humancaused sinkholes are also possible as a result of erosion.



FIGURE 5.15: UNITED STATES GEOLOGICAL SURVEY OF KARST MODIFIED FROM DAVIES AND LEGRAND, 1972

Erosion

Erosion in the Pee Dee Lumber Region is typically caused by flash flooding events. Erosion occurs in the Pee Dee Lumber Region, particularly along the banks of rivers and streams, but it is not an extreme threat to any of the participating counties and jurisdictions. This hazard ranked "low" in the previous Anson County and Montgomery County hazard mitigation plans and were only mentioned as secondary hazards in the Richmond County and Scotland County plans.

5.9.3 Historical Occurrences

Landslides

As shown in **Figure 5.15** above, just one landslide event has been reported in the region. No damage or injuries were reported with this event.

Sinkholes

In North Carolina, most sinkholes occur in the southern coastal plain due to the high concentration of limestone; however, they are also common in the western part of the state and in the Pee Dee Lumber region. According to a search of local media outlets across the state, the western area has experienced more than 40 sinkholes over the past 20 years.

A sinkhole occurred on July 29, 2012 along Highway 74 in Wadesboro. The sinkhole is roughly fifty feet wide and 25 feet deep. It was caused by increased water pressure in the area due to heavy rain. A gorge behind the highway flooded during the rain event. According to a local news source, the pipe is 30-year old and was unable to handle the increased capacity²⁰. The sinkhole has damaged two homes and disrupted several businesses and a homeless shelter in the area due to the blocked road. In addition, two motorists traveling in the same car had to be taken to the hospital when the car fell into the sinkhole. The road repairs are expected to take nearly six weeks. **Figure 5.16** below from WCNC show

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²⁰ http://www.wcnc.com/news/slideshows/Photos--Wadesboro-sinkhole-165741636.html

the extent of the damage²¹.

Figure 5.16: Wadesboro Sinkhole





Source: WCNC

Erosion

Several sources were vetted to identify areas of erosion in the Pee Dee Lumber Region. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources. No areas of erosion concern were reported by the planning committee.

5.9.4 Probability of Future Occurrences

Landslide

Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent annual probability). Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in the Pee Dee Lumber Region have greater risk than others given factors such as steepness on slope and modification of slopes.

Sinkholes

Sinkholes have also affected parts of North Carolina in recent history, but most of those impacts have been in the southeastern region of the state, not the Pee Dee Lumber region. While many sinkholes have been relatively small, it is still unlikely (less than 1 percent annual probability) that this region will continue to be affected in the future.

Erosion

Erosion remains a natural, dynamic, and continuous process for the Pee Dee Lumber Region, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent). However, given the lack of historical events, location, data, and threat to life or property, no further analysis will be done in Section 6: Vulnerability Assessment.

5.10 DAM FAILURE

²¹ NewsChannel 26 Staff (August 10, 2012). Massive Sinkhole Opens Up in Wadesboro. <u>WCNC.com</u> http://www.wcnc.com/news/local/Massive-sinkhole-opens-up-in-Wadesboro-

5.10.1 Background and Description

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 approximately 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. If a levee breaks, scores of properties may become submerged in floodwaters and residents may become trapped by 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.

5.10.2 Location and Spatial Extent

The North Carolina Division of Land Resources provides information on dams, including a hazard potential classification. There are three hazard classifications—high, intermediate, and low—that correspond to qualitative descriptions and quantitative guidelines. **Table 5.24** explains these classifications.

TABLE 5.24: NORTH CAROLINA DAM HAZARD CLASSIFICATIONS

Hazard Classification	Description	Quantitative Guidelines
Low	Interruption of road service, low volume roads Less than 25 vehicles per day	Less than 25 vehicles per day
	Economic Damage	Less than \$30,000
Intermediate	Damage to highways, Interruption of service	25 to less than 250 vehicles per day
Intermediate	Economic Damage	\$30,000 to less than \$200,000
	Loss of human life*	Probable loss of 1 or more human lives
Lligh	Economic Damage	More than \$200,000
High	*Probable loss of human life due to breached roadway or bridge on or below the dam	250 or more vehicles per day

Source: North Carolina Division of Energy, Mineral, and Land Resources

According to the North Carolina Division of Energy, Mineral, and Land Resources, there are 176 dams in the Pee Dee Lumber region²². Of these dams, 29 are classified as high hazard potential. These high hazard dams are summarized by county in **Table 5.25**. The Richmond Mill Dam in Scotland County was also reported as a critical facility in Scotland County. **Figure 5.17** shows the dam location for most dams in the region. According to a consensus of local government officials and the Regional Mitigation Planning Committee, a majority of these dams would not pose a threat in a breach or failure occurrence.

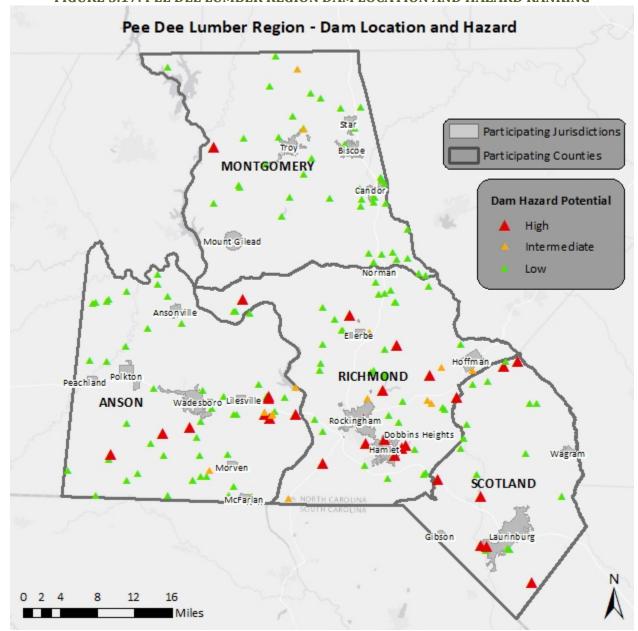


FIGURE 5.17: PEE DEE LUMBER REGION DAM LOCATION AND HAZARD RANKING

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²² The list of high hazard dams obtained from the North Carolina Division of Land Resources was reviewed and amended by local officials to the best of their knowledge and based on existing hazard mitigation plans.

Source: North Carolina Division of Land Resource; existing plans

TABLE 5.25: PEE DEE LUMBER REGION HIGH HAZARD DAMS

Dam Name	Hazard Potential	Surface Area (acres)	Max Capacity (Ac-ft)
Anson County			
Wadesboro Lake Dam	High	80.0	84
Little Lake Dam	High	3.0	70
White Store Lake Dam	High	28.0	291
Bonsal Tailings Dam	High	75.0	1890
Bv Hedrick Tailings Dike #3	High	41.0	570
E & D Sheppard Dam	High	3.0	24
Anson County WWTP Upper Dam (Sludge Lagoon)	High	6.3	50
Anson County WWTP Lower Dam (Sludge Lagoon)	High	10.5	105
Montgomery County			
River Road Dam	High	unknown	unknown
Richmond County			
Bland Lake Dam	High	7.0	64
Richmond Community College Dam	High	28.0	233
Hamlet City Lake Lower Dam	High	45.0	284
Boyd Lake Dam	High	65.0	120
Hamlet City Lake Upper Dam	High	56.0	735
Wall Lake Dam	High	13.0	92
Rankin Lake Dam	High	6.0	58
McKinney Lake Dam	High	73.0	834
Ledbetter Lake Dam	High	313.0	8100
Hinson Lake Dam	High	18.0	108
Wiggins Lake Dam	High	2.0	11
Millstone 4-H Camp Dam	High	6.0	38
Scotland County			
Big Muddy Lake Dam	High	60.0	569
Little Muddy Lake Dam	High	30.0	180
Richmond Millpond Dam	High	180.0	1161
Pine Lake Dam	High	19.0	137
Johns Lake Dam	High	115.0	540
X Way Millpond Dam	High	300.0	1382
Fair Lake Dam	High	8.0	54
Family Worship Center Lake Dam	High	9.0	43

Source: North Carolina Division of Energy, Mineral, and Land Resources 2018

5.10.3 Historical Occurrences

According to the North Carolina Division of Energy, Mineral, and Land Resources, there have been a total of 4 dam breaches reported in the Pee Dee Lumber Region, including three in Richmond County, and one in Scotland County, though no additional information was available. Additionally, several breach scenarios in the region could be catastrophic.

The Ledbetter Lake Dam near Rockingham (Richmond County) is currently leaking. According to an article from the Rockingham County Daily Journal, the leak is currently considered a level two event, indicating that immediate failure is not expected but failure in the near future is a possibility²³. Richmond County Emergency Services is in contact with NCDEQ and nearby residents. Owners of the dam have been asked to lower the lake level and hire an engineer to further assess the structural integrity of the dam. The 37-foot dam was built in the late 1800's, so it is aging. Richmond County emergency officials notified nearby residents; officials estimate only five to six houses are in the flood hazard area. The photos below in **Figure 5.18** indicate the dam and leak. No additional leaks or breaches have been reported in the Region.







Source: Rockingham County Daily Journal

5.10.4 Probability of Future Occurrence

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, several dams do pose a significant threat included Yakin Narrow Dam, Tillery Dam, and Blewett Falls Dam. No further analysis will be completed in Section 6: *Vulnerability Assessment* as more sophisticated dam breach plans (typically completed by the U.S. Army Corp of Engineers) are in place for the dams of concern in the region).

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²³ Kurry, Dawn (18 July 2012). Ledbetter Dam is Leaking. <u>YourDailyJournal.com (Rockingham Daily Journal).</u> http://www.yourdailyjournal.com/view/full_story/19436064/article-Ledbetter-Dam-is-leaking?instance=popular

5.11 FLOOD

5.11.1 Background

Flooding is the most frequent and costly natural hazard in the United States and is a hazard that has caused more than 10,000 deaths since 1900. Nearly 90 percent of presidential disaster declarations result from natural events where flooding was a major component.

Floods generally result from excessive precipitation and can be classified under two categories: general floods, precipitation over a given river basin for a long period of time along with storm-induced wave action, 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 typically determined by a combination of several major factors, including stream and river basin topography and physiography, precipitation and weather patterns, recent soil moisture conditions, and the degree of vegetative clearing and impervious surface.

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, and other large coastal storms. Urban flooding occurs where manmade 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 may also occur from a dam or levee failure within minutes or hours of heavy amounts of rainfall or from a sudden release of water held by a retention basin or other stormwater control facility. Although flash flooding occurs most often along mountain streams, it is also common in urbanized areas where much of the ground is covered by impervious surfaces.

The periodic flooding of lands adjacent to rivers, streams, and shorelines (land known as a 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 and the 500-year flood has a 0.2 percent chance of occurring in any given year.

5.11.2 Location and Spatial Extent

There are areas in the Pee Dee Lumber Region that are susceptible to flood events. Special flood hazard

areas in the Pee Dee Lumber Region were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM)²⁴. This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), Zone X500 (0.2-percent annual chance floodplain). According to GIS analysis, of the 1,839 square miles that make up the Pee Dee Lumber Region (including the area of Anson County, Montgomery County, Richmond County, and Scotland County), there are 159.09 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 3.89 square miles of land in zone X500 (0.2-percent annual chance floodplain/500-year floodplain). This equates to approximately nine percent of total land in a regulated flood zone. The county totals are presented below in **Table 5.26**.

TABLE 5.26: SUMMARY OF FLOODPLAIN AREAS IN THE PEE DEE LUMBER REGION

Location	100-year area (square miles)	500-year area (square miles)
Anson County	54.27	0.98
Montgomery County	31.00	0.30
Richmond County	42.58	0.78
Scotland County	31.24	1.83
PEE DEE LUMBER REGION TOTAL	159.09	3.89

It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas. **Figure 5.19** illustrates the location and extent of currently mapped special flood hazard areas for the Pee Dee Lumber Region based on best available FEMA Digital Flood Insurance Rate Map (DFIRM) data.

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²⁴ The county-level DFIRM data used for the Pee Dee Lumber Region were updated as follows: Anson County (2008); Montgomery County (2009); Richmond County (2008); Scotland County (2007).

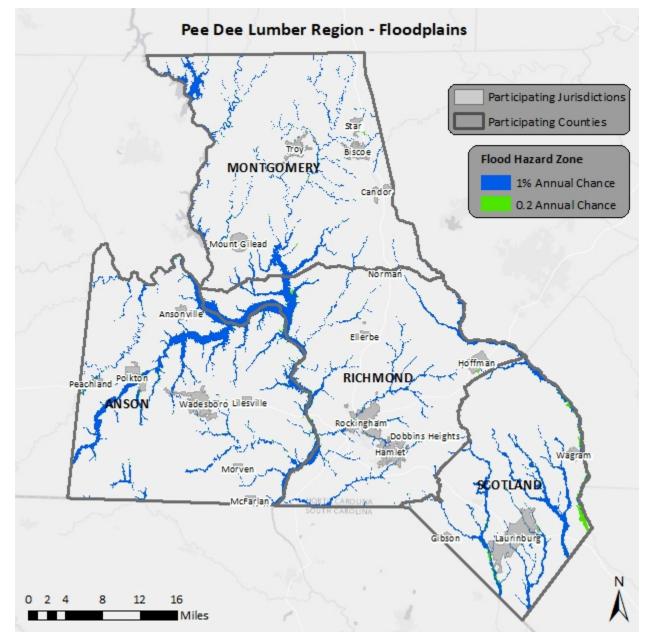


FIGURE 5.19: SPECIAL FLOOD HAZARD AREAS IN THE PEE DEE LUMBER REGION

Source: Federal Emergency Management Agency

5.11.3 Historical Occurrences

Information from the National Centers for Environmental Information was used to ascertain historical flood events. The National Centers for Environmental Information reported a total of 84 flood events throughout the Pee Dee Lumber Region since 1950²⁵. A summary of these events is presented in **Table 5.27**. These events accounted for almost \$36.5 million (2020 dollars) in property damage due to flood

²⁵ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

events throughout the region²⁶.

TABLE 5.27: SUMMARY OF FLOOD OCCURRENCES IN THE PEE DEE LUMBER REGION

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	40	1	0	\$5,630,000
Ansonville	7	0	0	\$0
Lilesville	0	0	0	\$0
McFarlen	0	0	0	\$0
Morven	0	0	0	\$0
Peachland		0	0	\$0
Polkton	3	0	0	\$0
Wadesboro	7	0	0	\$0
Unincorporated Area	23	1	0	\$5,630,000
Montgomery County	36	0	0	\$617,000
Biscoe	2	0	0	\$0
Candor	0	0	0	\$0
Mount Gilead	4	0	0	\$0
Star	0	0	0	\$0
Troy	4	0	0	\$0
Unincorporated Area	26	0	0	\$617,000
Richmond County	21	0	0	\$21,870,000
Dobbins Heights	0	0	0	\$0
Ellerbe	2	0	0	\$45,000
Hamlet	1	0	0	\$0
Hoffman	0	0	0	\$0
Norman	0	0	0	\$0
Rockingham	4	0	0	\$25,000
Unincorporated Area	14	0	0	\$21,800,000
Scotland County	20	2	0	\$8,410,000
East Laurinburg	0	0	0	\$0
Gibson	0	0	0	\$0
Laurinburg	5	0	0	\$0
Wagram	3	2	0	\$0
Unincorporated Area	12	0	0	\$8,410,000
Pee Dee Lumber Regional Total	117	3	0	\$36,527,000

Source: National Centers for Environmental Information

5.11.4 Historical Summary of Insured Flood Losses

According to FEMA flood insurance policy records as of August 2019, there have been 68 flood losses reported in the Pee Dee Lumber Region through the National Flood Insurance Program (NFIP) since

²⁶ The total damage amount was averaged over the number of affected counties when multiple counties were involved in the flood event.

1970, totaling over \$614,000 in claims payments. A summary of these figures for each Pee Dee Lumber county is provided in **Table 5.28**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in the Pee Dee Lumber Region have occurred but were either uninsured, denied claims payment, or not reported.

TABLE 5.28: SUMMARY OF INSURED FLOOD LOSSES IN THE PEE DEE LUMBER REGION

Location	Number of Policies	Flood Losses	Claims Payments
Anson County	7	3	\$21,525
Ansonville	*	*	*
Lilesville	0	0	\$0
McFarlan	*	*	*
Morven	*	*	*
Peachland	0	0	\$0
Polkton	0	0	\$0
Wadesboro	4	1	\$6,580
Unincorporated Area	3	2	\$14,945
Montgomery County	23	56	\$460,929
Biscoe	*	*	*
Candor	*	*	*
Mount Gilead	*	*	*
Star	*	*	*
Troy	2	0	\$0
Unincorporated Area	21	56	\$460,929
Richmond County	76	8	\$99,904
Dobbins Heights	*	*	*
Ellerbe	*	*	*
Hamlet	4	1	\$2,369
Hoffman	*	*	*
Norman	*	*	*
Rockingham	29	6	\$69,601
Unincorporated Area	43	1	\$27,934
Scotland County	75	1	\$32,327
East Laurinburg	3	0	\$0
Gibson	*	*	*
Laurinburg	61	1	\$32,327
Wagram	*	*	*
Unincorporated Area	11	2	\$0
PEE DEE LUMBER REGION TOTAL	181	68 Thurst	\$614,685

^{*}These communities do not participate in the National Flood Insurance Program. Therefore, no values are reported. Source: FEMA, NFIP

5.11.5 Repetitive Loss Properties

FEMA defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period, since 1978. A repetitive loss property may or may not be currently insured by the NFIP. Currently there are over 122,000 repetitive loss properties nationwide.

Currently (as of April 2012), there are 2 non-mitigated repetitive loss properties located in the Pee Dee Lumber Region (both in Rockingham, Richmond County), which accounted for 4 losses and more than \$47,500 in claims payments under the NFIP. The average claim amount for these properties is \$11,878. Both properties are commercial in type. Without mitigation, these properties will likely continue to experience flood losses. **Table 5.29** presents detailed information on repetitive loss properties and NFIP claims and policies for the Pee Dee Lumber Region.

TABLE 5.29: SUMMARY OF REPETITIVE LOSS PROPERTIES IN THE PEE DEE LUMBER REGION

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Anson County	0		0	\$0	\$0	\$0	\$0
Ansonville	0		0	\$0	\$0	\$0	\$0
Lilesville	0		0	\$0	\$0	\$0	\$0
McFarlan	0		0	\$0	\$0	\$0	\$0
Morven	0		0	\$0	\$0	\$0	\$0
Peachland	0		0	\$0	\$0	\$0	\$0
Polkton	0		0	\$0	\$0	\$0	\$0
Wadesboro	0		0	\$0	\$0	\$0	\$0
Unincorporated Area	0		0	\$0	\$0	\$0	\$0
Montgomery County	0		0	\$0	\$0	\$0	\$0
Biscoe	0		0	\$0	\$0	\$0	\$0
Candor	0		0	\$0	\$0	\$0	\$0
Mount Gilead	0		0	\$0	\$0	\$0	\$0
Star	0		0	\$0	\$0	\$0	\$0
Troy	0		0	\$0	\$0	\$0	\$0
Unincorporated Area	0		0	\$0	\$0	\$0	\$0
Richmond County	2		4	\$90,490	\$0	\$90,490	\$18,098
Dobbins Heights	0		0	\$0	\$0	\$0	\$0
Ellerbe	0		0	\$0	\$0	\$0	\$0
Hamlet	0		0	\$0	\$0	\$0	\$0
Hoffman	0		0	\$0	\$0	\$0	\$0
Norman	0		0	\$0	\$0	\$0	\$0
Rockingham	2	2 Non-	4	\$90,490	\$0	\$90,490	\$18,098
Hair an arrange and Arran		residential			·		
Unincorporated Area	0		0	\$0 60	\$0 60	\$0 60	\$0
Scotland County	0		0	\$0	\$0	\$0	\$0
East Laurinburg	0		0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
Gibson	0		0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
Laurinburg Wagram	0		0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
Unincorporated Area	0		0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0
ominicorporated Area	U		U	ŞU	ŞU	ŞU	ŞU

PEE DEE LUMBER REGION	2	4	\$90,490	ćo	\$90,490	¢19.009
TOTAL	2	4	390,490	ŞU	390,490	\$10,030

Source: National Flood Insurance Program

5.11.6 Probability of Future Occurrences

Flood events will remain a threat in the Pee Dee Lumber Region, and the probability of future occurrences will remain likely (between 10 and 100 percent annual probability).

Other Hazards

5.12 WILDFIRES

5.12.1 Background and Description

A wildfire is any outdoor fire (i.e. grassland, forest, brush land) that is not under control, supervised, or prescribed²⁷. Wildfires are part of the natural management of forest ecosystems, but may also be caused by human factors.

Nationally, 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. In North Carolina, a majority of fires are caused by debris burning.

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

Wildfire 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 hazards (such as tornadoes, hurricanes, etc.) increase the probability of wildfires by producing fuel in both urban and rural settings.

Many individual homes and cabins, subdivisions, resorts, recreational areas, organizational camps, businesses, and industries are located within high wildfire hazard areas. Furthermore, 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 wildfire events that can sweep through the brush and timber and destroy property within minutes.

Wildfires can result in severe economic losses as well. Businesses that depend on timber, such as paper mills and lumber companies, experience losses that are often passed along to consumers through higher prices and sometimes jobs are lost. The high cost of responding to and recovering from wildfires can deplete state resources and increase insurance rates. The economic impact of wildfires can also be felt

²⁷ Prescription burning, or "controlled burn," undertaken by land management agencies is the process of igniting fires under selected conditions, in accordance with strict parameters.

in the tourism industry if roads and tourist attractions are closed due to health and safety concerns.

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.

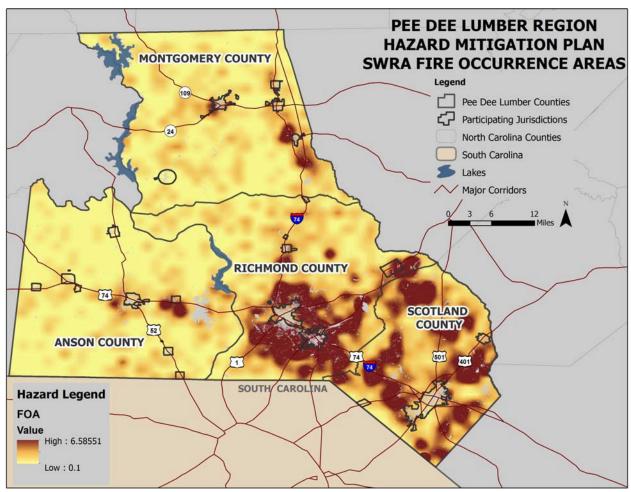
5.12.2 Location and Spatial Extent

The entire region is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Conversely, areas of high development limit wildfire risk. Areas in the urban-wildland interface (where development abuts forest or open land), however, are particularly susceptible to wildfire hazard. The urban more developed areas in Richmond and Scotland Counties (including Rockingham and Laurinburg), are prime examples of this. When large wildfires burn on these open lands, it can be difficult to stop its spread to the built environment, thus endangering structures and population.

5.12.3 Historical Occurrences

Figure 5.20 shows the Fire Occurrence Areas (FOA) in the Pee Dee Lumber Region based on data from the Southern Wildfire Risk Assessment. This data is based on historical fire ignitions and is reported as the number of fires that occur per 1,000 acres each year.

FIGURE 5.20: HISTORIC WILDFIRE EVENTS IN THE PEE DEE LUMBER REGION



Source: Southern Wildfire Risk Assessment

Information from the National Association of State Foresters was used to ascertain historical wildfire events. The National Association of State Foresters reported that a total of 3,816 events that have impacted an area greater than 1 acre have occurred throughout the Pee Dee Lumber Region since 2001²⁸. A summary of these events is presented in **Table 5.30**. The largest of these events was the Garner Farm Fire which occurred on April 17, 2017 and impacted 1,358 acres.

Based on data from the North Carolina Division of Forest Resources from 2001 to 2019, the Pee Dee Lumber Region experienced an average of 439 wildfires annually which burned a combined 1,754 acres, on average. **Table 5.30** provides a summary table for wildfire occurrences in the Pee Dee Lumber Region.

TABLE 5.31: HISTORICAL WILDFIRE OCCURRENCES IN THE PEE DEE LUMBER REGION

	Anson County	Montgomery County	Richmond County	Scotland County
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²⁸ These events are only inclusive of those reported by NASFI. It is likely that additional occurrences have occurred and have gone unreported.

Year	Number of Fires	Number of Acres Burned						
2001	68	391	44	226	142	460	175	1323
2002	26	238	36	258	82	363	154	1664
2003	10	52	9	41	38	172	57	785
2004	24	272	40	82	102	686	90	637
2005	38	170	26	56	106	579	96	1518
2006	39	125	37	87	99	704	96	1086
2007	40	83	39	118	93	448	91	1477
2008	42	303	46	191	49	229	64	866
2009	31	89	24	68	58	99	39	324
2010	45	154	33	154	120	489	62	1046
2011	32	165	25	155	113	588	86	609
2012	27	111	21	73	89	543	61	1251
2013	34	62	19	247	75	248	16	59
2014	29	83	30	73	74	1040	51	1438
2015	30	198	22	71	26	199	0	0
2016	14	22	46	392	94	711	54	2681
2017	30	72	19	76	78	1111	29	1650
2018	15	51	6	46	42	261	19	2327

Source: North Carolina Division of Forest Resources

There is no narrative information on historical wildfires to impact the Pee Dee Lumber Region found in the NCEI Database, the NC State Hazard Mitigation Plan, the North Carolina Forest Service or provided by local emergency managers. The main causes of previous wildfires in the Pee Dee Lumber Region are from debris burning (X%), and incendiary causes (X%), but they are generally smaller fires that are controlled before causing major damages.

5.12.4 Probability of Future Occurrences

Wildfire events will be an ongoing occurrence in the Pee Dee Lumber Region. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due local climate and ground conditions. Risk is elevated in Richmond and Scotland Counties as indicated by higher numbers of historical fires and fire size in those counties. The probability assigned to the Pee Dee Lumber Region for future wildfire events is likely (10 and 100 percent annual probability).

5.13 INFECTIOUS DISEASE

For the purposes of this plan, this section will assess infectious diseases and vector-borne diseases within the Pee Dee Lumber region.

5.13.1 Background and Description

Infectious Disease

Communicable, or infectious, diseases are conditions that result in clinically evident illness which are

transmissible directly from one person to another or indirectly through vectors such as insects, air, water, blood, or other objects. The impact of communicable disease can range from the mild effects of the common cold to the extreme lethality of pneumonic plague or anthrax. The public health system in the United States was developed in large part as a response to the often urgent need to respond to or prevent outbreaks of communicable diseases. Through public health methods of disease reporting, vaccinations, vector control, and effective treatments, most communicable diseases are well controlled in the United States and across the Pee Dee Lumber region. However, control systems can fail and when people come together from locations outside of the state, outbreaks can occur, even in the most modern of communities. In this section, some of the more significant potential communicable disease concerns are described.

The threats discussed in this section usually do not occur on a regular basis, though some are more frequent. The diseases described herein do not originate from intentional exposure (such as through terrorist actions) but do present significant issues and concerns for the public health community. There are numerous infectious diseases that rarely, if ever, occur in the State of North Carolina, such as botulism or bubonic plague. Some highly dangerous diseases which could potentially be used as biological weapons, such as anthrax, pneumonic plague, and smallpox, are safely housed and controlled in laboratory settings such as at the Center for Disease Control and Prevention (CDC). Other diseases have not (yet) mutated into a form that can infect humans, or otherwise lie dormant in nature.

There have been several significant viral outbreaks from emerging diseases in recent years of both national and international importance. The Zika virus and West Nile virus are viruses that are typically passed to humans or animals by mosquitoes and made major news as emergent disease threats. Meanwhile, diseases that are spread directly between human beings such as Severe Acute Respiratory Syndrome (SARS) and Ebola have also been identified as serious threats. While each of these conditions caused a great deal of public health concern when they were first identified, SARS has virtually disappeared, West Nile virus occurs with low frequency and causes serious disease in only a very small percentage of cases, Ebola has been more or less contained and a vaccine is in development, and many people infected with Zika will not experience symptoms from the disease.

Other communicable diseases pose a much more frequent threat to the citizens of in the region. Some of the infectious diseases of greatest concern include influenza, particularly in a pandemic form, as well as norovirus, and multiple antibiotic-resistant tuberculosis. Even in one of its normal year-to-year variants, influenza (commonly referred to as "flu") can result in serious illness and even death in young children, the elderly and immune-compromised persons. But there is always the potential risk of the emergence of influenza in one of the pandemic H1N1 forms, such as in the "Spanish Flu" outbreak of 1918-19, which killed over 50 million people worldwide. Every year, North Carolina sees hundreds of cases of influenza, leading to hundreds of hours of lost productivity in businesses due to sick employees.

Of note, a vaccine for influenza is produced every year and, according to the CDC, is highly effective in preventing the disease.

Norovirus is recognized as the leading cause of foodborne-disease outbreaks in the United States. The virus can cause diarrhea, vomiting, and stomach pain, and is easily spread from person to person through contaminated food or water and by surface to surface contact. Especially vulnerable populations to this virus include those living or staying in nursing homes and assisted living facilities and other healthcare facilities such as hospitals. Norovirus could also be a threat in the event of large public

gatherings such as sporting events, concerts, festivals, and so forth. North Carolina often experiences norovirus outbreaks on an annual basis. No vaccine or treatment exists for the Norovirus, making it especially dangerous for the public in the event of an outbreak.

Public health threats can occur at any time and can have varying impacts. Discussions between public health professionals, planning officials, and first response agencies are essential in order to facilitate safe, effective, and collaborative efforts toward outbreaks.

Vector-Borne Diseases

Bacterial, viral and parasitic diseases that are transmitted by mosquitoes, ticks and fleas are collectively called "vector-borne diseases" (the insects and arthropods are the "vectors" that carry the diseases). Although the term "vector" can also apply to other carriers of disease — such as mammals that can transmit rabies or rodents that can transmit hantavirus — those diseases are generally called zoonotic (animal-borne) diseases.

The most common vector-borne diseases found in North Carolina and the Pee Dee Lumber region are carried by ticks and mosquitoes. The tick-borne illnesses most often seen in the state are Rocky Mountain Spotted Fever, ehrlichiosis, Lyme disease and Southern Tick-Associated Rash Illness (STARI). The most frequent mosquito-borne illnesses, or "arboviruses," in North Carolina include La Crosse encephalitis, West Nile virus and Eastern equine encephalitis. An outbreak of the West Nile Virus began showing up in the United States in 1999, with North Carolina reporting 63 cases from that time through the end of 2016.

5.13.2 Location and Spatial Extent

Extent is difficult to measure for an infectious disease event as the extent is largely dependent on the type of disease and on the effect that it has on the population (discussed above). Extent can be somewhat defined by the number of people impacted, which depending on the type of disease could number in the tens of thousands within the state.

5.13.3 Historical Occurrences

Infectious Disease

Information from the North Carolina Department of Health and Human services was used to monitor and track cases of the infectious disease COVID-19. A COVID – 19 Pandemic disaster declaration was declared for North Carolina on March 24, 2020. **Table 5.31** provides a summary of confirmed cases and deaths from COVID-19 in the Pee Dee Lumber Region as of May 16, 2022.

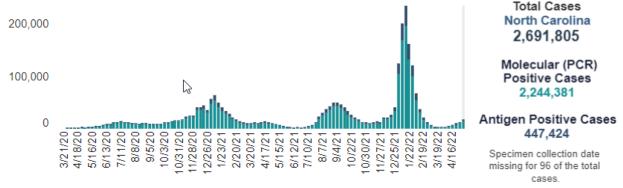
TABLE 5.31: SUMMARY OF CONFIRMED COVID-19 CASES IN THE PEE DEE LUMBER REGION

Location	Number of Cases	Number of Deaths*
Anson County	6,567	101
Montgomery County	7,308	129
Richmond County	12,917	192
Scotland County	10,125	132
Pee Dee Lumber Region Total	36,917	554

Source: North Carolina Department of Health and Human Services
*Deaths reflect deaths in persons with laboratory-confirmed COVID-19 reported by local health departments to the NC Department of Health and Human Services

As of May 16, 2022, NC DHHS reported there were 2,691,805 cases of COVID-19 and 24,588 deaths as a result of the virus in North Carolina²⁹. These cases reflect cases that were tested and returned positive, including the NC State Laboratory of Public Health and reporting hospital and commercial labs. **Figure 5.21** below provides overview of the total number of COVID-19 cases by date of specimen collection for North Carolina as of May 16, 2022.

FIGURE 5.21: CUMULATIVE TOTAL NUMBER OF COVID-19 CASES BY DATE OF SPECIMENT COLLECTION*



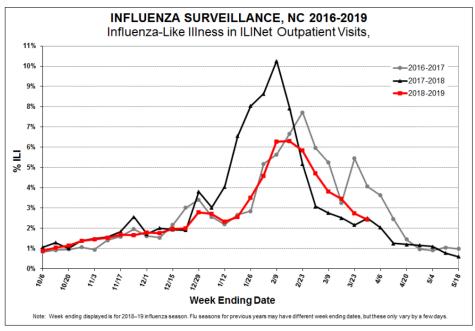
Source: North Carolina Department of Health and Human Services

The influenza is historically the most common infectious disease that has occurred in the Pee Dee Lumber Region. Cases of the flu tend to occur in the late fall and early winter months. In recent years, cases of the influenza and influenza-like illnesses have been reported in hospitals. As seen in **Figure 5.22** below, 172 people throughout North Carolina died from the flu between 2018 and 2019.

FIGURE 5.22: INFLUENZA SURVEILLANCE, NC 2016-2019

^{*}All data are preliminary and might change as cases are investigated. Numbers may not sum to 100% due to rounding

²⁹ https://www.ncdhhs.gov/covid-19-case-count-nc#by-counties



N.C. Flu-Associated Deaths*



172Total Flu Deaths This Season (9/30/2018-5/18/2019)

Source: NC Department of Health and Human Services

Vector-Borne Diseases

In 2016, North Carolina state health officials encouraged citizens to take preventative measures against mosquito bites to avoid contracting the Zika virus. \$477,500 dollars was allocated from the Governor's yearly budget to develop an infrastructure to detect, prevent, control, and respond to the Zika virus and other vector-borne illnesses³⁰.

5.13.4 Probability of Future Occurrences

It is difficult to predict the future probability of infectious diseases due to the difficulty with obtaining information on this type of hazard. The most common and probable disease in the state has shown to be influenza; however, based on historical data, it is relatively unlikely (between 1 and 33.3 percent annual probability) that the Buncombe-Madison region will experience an outbreak of infectious diseases in the future.

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 $^{^{30} \ \}underline{\text{https://www.ncdhhs.gov/news/press-releases/nc-prepared-zika-virus-risk-local-virus-carrying-mosquitoes-low}$

Technological Hazards

5.14 HAZARDOUS SUBSTANCES

5.14.1 Background and Description

Hazardous materials can be found in many forms and quantities that can potentially cause death; serious injury; long-lasting health effects; and damage to buildings, homes, and other property in varying degrees. Such materials are routinely used and stored in many homes and businesses and are also shipped daily on the nation's highways, railroads, waterways, and pipelines. This subsection on the hazardous material hazard is intended to provide a general overview of the hazard, and the threshold for identifying fixed and mobile sources of hazardous materials is limited to general information on rail, highway, and FEMA-identified fixed HAZMAT sites determined to be of greatest significance as appropriate for the purposes of this plan.

Hazardous material (HAZMAT) incidents can apply to fixed facilities as well as mobile, transportation-related accidents in the air, by rail, on the nation's highways, and on the water. Approximately 6,774 HAZMAT events occur each year, 5,517 of which are highway incidents, 991 are railroad incidents, and 266 are due to other causes³¹. In essence, HAZMAT incidents consist of solid, liquid, and/or gaseous contaminants that are released from fixed or mobile containers, whether by accident or by design as with an intentional terrorist attack. A HAZMAT incident can last hours to days, while some chemicals can be corrosive or otherwise damaging over longer periods of time. In addition to the primary release, explosions and/or fires can result from a release, and contaminants can be extended beyond the initial area by persons, vehicles, water, wind, and possibly wildlife as well.

HAZMAT incidents can also occur as a result of or in tandem with natural hazard events, such as floods, hurricanes, tornadoes, and earthquakes, which in addition to causing incidents can also hinder response efforts. In the case of Hurricane Floyd in September 1999, communities along the Eastern United States were faced with flooded junkyards, disturbed cemeteries, deceased livestock, floating propane tanks, uncontrolled fertilizer spills, and a variety of other environmental pollutants that caused widespread toxological concern.

Hazardous material incidents can include the spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous material, but exclude: (1) any release which results in exposure to poisons solely within the workplace with respect to claims which such persons may assert against the employer of such persons; (2) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel or pipeline pumping station engine; (3) release of source, byproduct, or special nuclear material from a nuclear incident; and (4) the normal application of fertilizer.

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³¹ FEMA, 1997.

5.14.2 Location and Spatial Extent

As a result of the 1986 Emergency Planning and Community Right to Know Act (EPCRA), the Environmental Protection Agency provides public information on hazardous materials. One facet of this program is to collection information from industrial facilities on the releases and transfers of certain toxic agents. This information is then reported in the Toxic Release Inventory (TRI). TRI sites indicate where such activity is occurring. The Pee Dee Lumber Region has 57 TRI sites. These sites are shown in Figure 5.23.

PEE DEE LUMBER REGION HAZARD MITIGATION PLAN MONTGOMERY COUNTY TRI SITES - FIXED HAZMAT Legend Pee Dee Lumber Counties **Participating Jurisdictions North Carolina Counties South Carolina** Lakes **Major Corridors** RICHMOND COUNTY 220 SCOTLAND COUNTY **ANSON COUNTY** 501 401 SOUTH CAROLINA **Hazard Legend** TRI Sites

FIGURE 5.23: TOXIC RELEASE INVENTORY (TRI) SITES IN THE PEE DEE LUMBER REGION

Source: EPA

In additional to "fixed" hazardous materials locations, hazardous materials may also impact the region via roadways and rail. Many roads in the region are narrow and winding, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident. Additional analysis will be performed on fixed sites and mobile corridors in Section 6: *Vulnerability Assessment*.

5.14.3 Historical Occurrences

The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) lists historical occurrences throughout the nation. A "serious incident" (highlighted in yellow in **Table 5.32** below) is a hazardous materials incident that involves:

- a fatality or major injury caused by the release of a hazardous material,
- the evacuation of 25 or more persons as a result of release of a hazardous material or exposure to fire,
- a release or exposure to fire which results in the closure of a major transportation artery,
- the alteration of an aircraft flight plan or operation,
- · the release of radioactive materials from Type B packaging,
- the release of over 11.9 galls or 88.2 pounds of a severe marine pollutant, or
- the release of a bulk quantity (over 199 gallons or 882 pounds) of a hazardous material.

However, prior to 2002, a hazardous material "serious incident" was defined as follows:

- a fatality or major injury due to a hazardous material,
- closure of a major transportation artery or facility or evacuation of six or more person due to the presence of hazardous material, or
- a vehicle accident or derailment resulting in the release of a hazardous material.

Table 5.32 presents a summary of HAZMAT incidents reported in the Pee Dee Lumber Region.

TABLE 5.32: SUMMARY OF HAZMAT INCIDENTS IN THE PEE DEE LUMBER REGION

Location	Number of Occurrences	Deaths / Injuries	Туре	Costs
Anson County	20	0/0	Highway; Railway	\$122,025
Ansonville	0	0/0	n/a	\$0
Lilesville	4	0/0	Highway; Railway	\$25
McFarlan	0	0/0	n/a	\$0
Morven	0	0/0	n/a	\$0
Peachland	1	0/0	Highway	\$0
Polkton	1	0/0	Railway	\$0
Wadesboro	9	0/0	Highway; Railway	\$108,460
Unincorporated Area	5	0/0	Highway; Railway	\$13,540
Montgomery County	13	0/0	Highway	\$898,720
Biscoe	2	0/0	Highway	\$3,000
Candor	0	0/0	n/a	\$0
Mount Gilead	4	0/0	Highway	\$895,400
Star	0	0/0	n/a	\$0
Troy	4	0/0	Highway	\$240
Unincorporated Area	3	0/0	Highway	\$80
Richmond County	135	0/0	Highway; Railway	\$183,973

Location	Number of Occurrences	Deaths / Injuries	Туре	Costs
Dobbins Heights	0	0/0	n/a	\$0
Ellerbe	0	0/0	n/a	\$0
Hamlet	124	0/0	Railway	\$119,973
Hoffman	1	0/0	Highway	\$22,200
Norman	0	0/0	n/a	\$0
Rockingham	10	0/0	Highway	\$41,800
Unincorporated Area	0	0/0	n/a	\$0
Scotland County	22	0/0	Highway	\$6,120
East Laurinburg	0	0/0	n/a	\$0
Gibson	0	0/0	n/a	\$0
Laurinburg	22	0/0	Highway	\$6,120
Wagram	0	0/0	n/a	\$0
Unincorporated Area	0	0/0	n/a	\$0
PEE DEE LUMBER REGION TOTAL	190	0/0		\$1,210,838

Source: USDOT; PHMSA

5.14.4 Probability of Future Occurrence

Given the location of 57 toxic release inventory sites in the Pee Dee Lumber Region and several serious roadway incidents, it is possible that a hazardous material incident may occur in the region possible (1 to 10 percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. This hazard is recognized as one of the greatest threats to the Pee Dee Lumber Region. Furthermore, there are detailed plans in place to respond to an occurrence.

5.15 Radiological Emergency - Fixed Nuclear Facilities

5.15.1 Background and Description

Although not referenced in the previous Pee Dee Lumber Regional Hazard Mitigation Plan, radiological emergencies will be assessed in this update.

A nuclear and radiation accident is defined by the International Atomic Energy Agency as "an event that has led to significant consequences to people, the environment or the facility. Often, this type of incident results from damage to the reactor core of a nuclear power plant which can release radioactivity into the environment. The degree of exposure from nuclear accidents has varied from serious to catastrophic. While radiological emergencies generally are a rare occurrence, many incidents are extremely well known due to their large-scale impact and serious effects on people and the environment.

HB Robison Steam Electric Station Unit 2, which is the plant located closest to the Pee Dee Lumber Region, is a 2,339-megawatt power plant that began commercial operation in 1970. The plant consists of

one 735 MW pressurized water reactor. The plant operates with a very high level of security³².

5.15.2 Location and Spatial Extent

Thee of the four counties (Montgomery County) is at risk to a nuclear incident. However, areas in the southern part of the region are more susceptible due to their proximity to the HB Robison Steam Electric Station. The International Atomic Energy Association has developed a scale called the International Nuclear and Radiological Event Scale (INES) which provides a quantitative means of assessing the extent of a nuclear event. This scale, like the MMI used for earthquakes, is logarithmic which means that each increasing level on the scale represents an event 10 times more severe than the previous level (**Figure 5.24**).

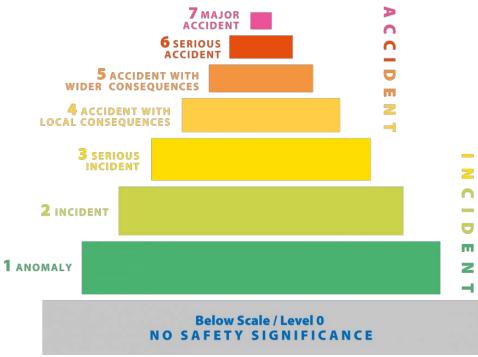


Figure 5.24: International Nuclear Event Scale

Source: International Atomic Energy Agency

The Nuclear Regulatory Commission defines two emergency planning zones around nuclear plants. Areas located within 10 miles of the station are considered to be within the zone of highest risk to a nuclear incident and this radius is the designated evacuation radius recommended by the Nuclear Regulatory Commission. Within the 10-mile zone, the primary concern is exposure to and inhalation of radioactive contamination. The most concerning effects in the secondary 50-mile zone are related to ingestion of food and liquids that may have been contaminated. All areas of the counties that are not located within the 10-mile radius are located within this 50-mile radius that is still considered to be at risk from a nuclear incident.

The aforementioned nuclear plant, HB Robison Steam Electric Station, is within 50 miles of the Pee Dee Lumber counties. A map of all power plants in North Carolina can be seen below **Figure 5.25**.

³² https://www.nrc.gov/info-finder/reactors/rob2.html

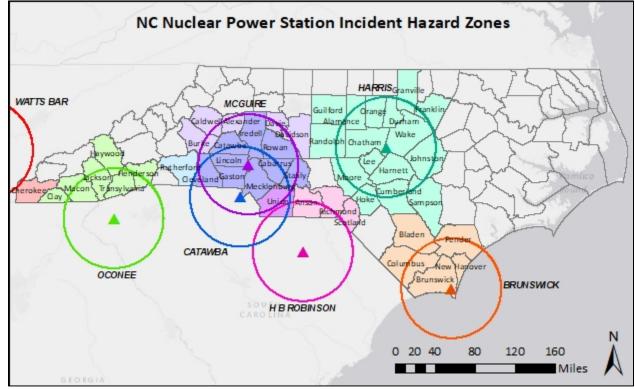


Figure 5.25: North Carolina Nuclear Plants Stations Incident Hazard Zones

Source: International Atomic Energy Agency

5.15.3 Historical Occurrences

Although there have been no major nuclear events at either the HB Robison Steam Electric Station, there is some possibility that one could occur as there have been incidents in the past in the United States at other facilities and at facilities around the world.

5.15.4 Probability of Future Occurrences

A nuclear event is a very rare occurrence in the United States due to the intense regulation of the industry. There have been incidents in the past, but it is considered unlikely (less than 1 percent annual probability).

5.16 Terrorism

5.16.1 Background and Description

Terrorism was not referenced in the previous Pee Dee Lumber Regional Hazard Mitigation Plan, but is addressed in this update. For the purpose of this report, terrorism encompasses explosive, chemical biological, nuclear, and other threats.

Terrorism is defined in the United States by the Code of Federal Regulations is "the unlawful use of force or violence against persons or property to intimidate or coerce a government, civilian population, or any

segment thereof, in furtherance of political or social objectives." Terrorist acts may include assassinations, kidnappings, hijackings, bombings, small arms attacks, vehicle ramming attacks, edged weapon attacks, incendiary attacks, cyber-attacks (computer based), and the use of chemical, biological, nuclear and radiological weapons. For the purposes of this plan, cyber-attacks are included as a separate hazard.

Historically the main categories of weapons of mass destruction (WMDs) used in terror attacks are Chemical, Biological, Radiological, Nuclear, and Explosive (collectively referred to as CBRNE). As we rank these categories, considering immediate danger posed, impact, probability, technical feasibility, frequency, and historical success, they are typically ranked in the following way.

Explosive

Explosive attacks lead all others due to their immediate danger to life and health, immediate and measurable impact, high probability, low cost/easy degree of technical feasibility, and a long history of successful attacks.

Chemical

Chemical attacks can pose immediate danger to life and health depending upon the materials used. Chemicals are easy to access, low cost, and easy to deploy. Chemical terrorism can have high and persistent impacts to people and places. These types of attacks are probable and have enjoyed historical success.

Radiological

Radiological attacks can pose significant threats to life and health depending upon the specific materials used. Radiological materials while restricted and regulated are accessible to people with some knowledge in this discipline. While radiological incidents have occurred, they occur less frequently than explosive and chemical attacks.

Biological

Biological attacks can pose significant threats to life and health. They are typically deployed as diseases and bio-toxins. They require some degree of technical expertise in order to be deployed successfully. While biological incidents have occurred, they occur less frequently than explosive and chemical attacks.

Nuclear

While yielding a very high impact, the Nuclear attack is extremely rare due to the fact that it is cost prohibitive and very technically difficult to achieve. This type of attack, however, could be state sponsored which makes it viable.

OTHER

Terrorism Hazard Assessment must also account for modern trends and changes. An additional "OTHER" category should be considered that includes small arms attacks, vehicle ramming attacks, edged weapon attacks, and incendiary attacks.

5.16.2 Location and Spatial Extent

All parts of North Carolina are vulnerable to a terror event; however, terrorism tends to target more densely populated areas. The map in **Figure 5.26** displays the population density in each county in the Buncombe-Madison Region using census tract levels.

FIGURE 5.26: POPULATION DENSITY IN PEE DEE LUMBER REGION

Furthermore, the most recent population counts of each participating county and jurisdictions can be seen in **Table 5.33** below.

Table 5.33: 2018 Population Estimates

Location	8 Population Estimates 2018 Population Estimate
Anson County	24,446
Ansonville	589
Lilesville	483
McFarlan	108
Morven	466
Peachland	402
Polkton	2,561
Wadesboro	5,275
Unincorporated Area	14,562
Montgomery County	27,271
Biscoe	1,716
Candor	817
Mount Gilead	1,142
Star	849
Troy	3,222
Unincorporated Area	19,525
Richmond County	44,897
Dobbins Heights	839
Ellerbe	978
Hamlet	6,328
Hoffman	572
Norman	132
Rockingham	8,659
Unincorporated Area	27,389
Scotland County	34,810
East Laurinburg	279
Gibson	500
Laurinburg	15,002
Wagram	777
Unincorporated Area	18,452
PEE DEE LUMBER REGION TOTAL	131,424

Source: US Census Bureau, NC Office of Budget and Management

5.16.3 Historical Occurrences

No extreme cases of terror attacks have previously affected the Pee Dee Lumber region. However, as the population in the area continues to increase, so does the chance of an attack.

5.16.4 Probability of Future Occurrences

The Pee Dee Lumber region has experienced no major terrorist attacks. The probability of future occurrences of a terrorist attack, while unlikely (between 1 and 10 percent annual probability) is a real possibility that the area must be prepared for.

5.17 Cyber

5.17.1 Background and Description

Cyberattacks are deliberate attacks on information technology systems in an attempt to gain illegal access to a computer, or purposely cause damage. As the world and the South Mountains region become more technologically advanced and dependent upon computer systems, the threat of cyberattacks is becoming increasingly prevalent. Also known as computer network attacks, cyberattacks are difficult to recognize and typically use malicious code to alter computer data or steal information.

Mitigating and preparing for cyberattacks is challenging because of how diverse and complex attacks can be. The FBI is the lead federal agency for investigating cyberattacks by criminals, overseas adversaries, and terrorists. In North Carolina, the Department of Information Technology is the lead agency that maintains Cybersecurity and Risk Management resources.

Cyberattacks can happen in both the public and private sector. They may be carried out by a specific individual, or by groups from afar. Many attacks attempt to steal money or to disturb normal operations. According to the 2017 Verizon Report of Data Breaching, 93% of all data breaches had a financial or espionage motive, and espionage cases are rising.

There are many types of cyberattack incident patterns, which include:

- Web App Attacks: Incidents in which web applications were attacked, which can include exploiting code-level vulnerabilities in the application.
- Point-of-Sale Intrusions: Remote attacks against environments where card-present retail transactions are conducted.
- Insider and Privilege Misuse: Unapproved or malicious use of organizational resources.
- Miscellaneous Errors: Incidents in which unintentional actions directly compromise an attribute of a security asset.
- Physical Theft and Loss: Incidents where an information asset went missing.
- Crimeware: Instances involving malware that do not fit into a more specific pattern.
- Payment Card Skimmers: Incidents involving skimming devices physically implanted on an asset that reads magnetic stripe data from payment cards.
- Cyber-espionage: Unauthorized network or system access linked to state-affiliated actors.
- Denial-of-Service Attacks: Any attack intended to compromise the availability of networks and systems that are designed to overwhelm systems, resulting in performance degradation or interruption of service.

Figure 5.27 below displays nationwide cyberattack incident patterns from the 2017 Verizon Data Breach Investigations Report.

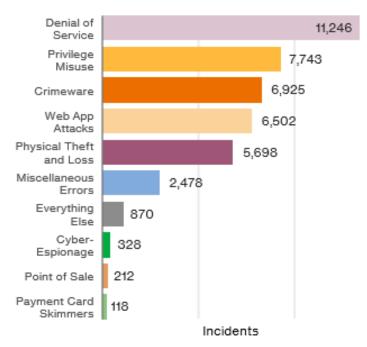


Figure 5.27: Percentage and Counts of Incidents Per Pattern

Source: 2017 Verizon Data Breach Investigations Report

5.17.2 Location and Spatial Extent

Cyberattacks happen all over the world and are not restricted to a certain locational boundary. They tend to affect the public industry rather than private industries.

5.17.3 Historical Occurrences

In North Carolina and the Pee Dee Lumber region, the Department of Information Technology specializes in cybersecurity and risk management. Within the department, the NC Information Sharing and Analysis Center gathers information on cyber threats within the State raise cybersecurity.

In 2016, North Carolina reported the highest number of cybercrimes in the "non-payment/non-delivery" sector, which can be seen in **Table 5.34** below.

TABLE 5.34: NORTH CAROLINA CYBERCRIMES AND VICTIM COUNTS IN 2016

•	Crima Tuna bu Victim Count			
ы	Crime Type by Victim Count Crime Type	Victim Count	Crime Type	Victim Count
_		614	Health Care Related	10
	419/Overpayment			
	Advanced Fee	384	IPR/Copyright and Counterfeit	58
	Auction	442	Identity Theft	345
	BEC/EAC	254	Investment	28
	Charity	10	Lottery/Sweepstakes	119
	Civil Matter	28	Malware/Scareware	62
	Confidence Fraud/Romance	326	Misrepresentation	102
	Corporate Data Breach	74	No Lead Value	121
	Credit Card Fraud	274	Non-payment/Non-Delivery	1,844
	Crimes Against Children	19	Other	218
	Criminal Forums	0	Personal Data Breach	569
	Denial of Service	28	Phishing/Vishing/Smishing/Pharming	399
	Employment	467	Ransomware	67
	Extortion	468	Re-shipping	25
	Gambling	1	Real Estate/Rental	280
	Government Impersonation	319	Tech Support	298
	Hacktivist	2	Terrorism	6
	Harassment/Threats of	364	Virus	29
	Violence			
	Descriptors*			
	Social Media	455	Virtual Currency	38

Source: FBI Internet Crime Complaint Center, 2016

Although the South Mountains region has not reported any major catastrophic cyberattacks, the potential to experience one is unpredictable and can happen at any time.

5.17.4 Probability of Future Occurrences

As the world's dependency on technology grows, the possibility of experiencing cyberattacks rises as well. There have not been severe past occurrences in the region, and it is considered unlikely (less than 1 percent annual probability) to experience one in the near future.

5.18 Electromagnetic Pulse

5.18.1 Background and Description

The United States Department of Energy defines electromagnetic pulses (EMPs) as "intense pulses of electromagnetic energy resulting from solar-caused effects or man-made nuclear and pulse power devices." EMPs can be naturally occurring or human-caused hazards. Examples of natural EMP events include:

- Lightning electromagnetic pulse
- Electrostatic discharge
- Meteoric electromagnetic pulse, and
- Coronal mass ejection, also known as a solar electromagnetic pulse.

A human-caused EMP (such as a nuclear EMP) is a technological hazard that can cause severe damage to electrical components attached to power lines or communication systems. One of the most complex aspects of EMPs is the fact they are invisible, unpredictable, and rapid. They can also overload electronic devices that people heavily rely on every day. EMPs are harmless to people biologically; however, an EMP attack could damage electronic systems such as planes or cars. This could cause destruction of property and life and potentially generate disease or societal collapse.

In 2015, Congress amended the Homeland Security Act of 2002 by passing the Critical Infrastructure Protection Act (CIPA), which protects Americans from an EMP. It also required reporting of EMP threats, research and development, and a campaign to educate planners and emergency responders about EMP events.

5.18.2 Location and Spatial Extent

An EMP can happen in any location, and they are relatively unpredictable. Due to advancing technologies, densely populated may be more prone to damages from an EMP. Therefore, bigger cities in the Pee Dee Lumber region may be more susceptible.

5.18.3 Historical Occurrences

There have been no reports of EMP occurrences in the Pee Dee Lumber region.

5.18.4 Probability of Future Occurrences

The probability of an EMP is unlikely (less than 1 percent annual probability), but an occurrence could have catastrophic impacts.

5.19 CONCLUSIONS ON HAZARD RISK

The hazard profiles presented in this section were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its "How-to" guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

5.19.1 Hazard Extent

Table 5.35 describes the extent of each natural hazard identified for the Pee Dee Lumber Region. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE 5.35 EXTENT OF PEE DEE LUMBER REGION HAZARDS

Natural Hazards				
Drought	Drought extent is defined by the North Carolina Drought Monitor Classifications which			
	include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and			
	Exceptional Drought (page 5:6). According to the North Carolina Drought Monitor			
	Classifications, the most severe drought condition is Exceptional. Each of the participating			
	counties has received this ranking (three times) in the last 19 reporting years. Every county			
	reported drought conditions in 19 out of the last 19 reporting years.			

The extent of excessive heat can be defined by the maximum temperature reached. The highest temperature recorded in the Pee Dee Lumber Region is 108 degrees Fahrenheit in Hamlet (Richmond County) in 2007 and in Mount Gilead in 1944. **Excessive Heat** • Anson County: 107 °F • Montgomery County: 108 °F Richmond County: 108 °F • Scotland County: 107 °F Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into **Hurricane and Coastal** Category 1 through Category 5 (Table 5.10). The greatest classification of hurricane to Hazards traverse directly through the Pee Dee Lumber Region was Hurricane Hazel which carried tropical force winds of 110 knots upon arrival. Tornadoes: Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA (Figure 5.6) as well as the Fujita/Enhanced Fujita Scale (Tables 5.12 and 5.13). The greatest magnitude reported was an F4 in Scotland County (last reported on April 8, 1957). It should be noted that an F5 tornado is possible. • Anson County: F2 • Montgomery County: F2 • Richmond County: F3 Scotland County: F4 Thunderstorms: Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in the Pee Dee Lumber Region was reported on May 11, 2009 at 78 knots (approximately 89 mph). It should be noted that future events may exceed these historical occurrences. • Anson County: 75 knots Tornadoes/Thunderstorms • Montgomery County: 61 knots • Richmond County: 63 knots • Scotland County: 78 knots Lightning: According to the Vaisala flash density map (Figure 5.15), the majority of the Pee Dee Lumber Region is located in an area that experiences 6 to 12 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures. Hailstorms: Hail extent can be defined by the size of the hail stone. The largest hail stone reported in the Pee Dee Lumber Region was 4.5 inches (reported May 27, 1998). It should be noted that future events may exceed this. • Anson County: 3.00 inches • Montgomery County: 4.5 inches • Richmond County: 1.75 inches • Scotland County: 2.00 inches The extent of winter storms can be measured by the amount of snowfall received (in inches). The greatest 24-hour snowfall was reported in the region was 16.00 inches Severe Winter Weather reported on January 25, 2000. Additional greatest 24-hour snowfall records for the region are listed below: • Anson County: 16.0 inches

	Montgomery County: 16.0 inches				
	Richmond County: 13.0 inches				
	Scotland County: 9.0 inches				
Earthquakes	Earthquake extent can be measured by the Richter Scale (Table 5.20) and the Modified Mercalli Intensity (MMI) scale (Table 5.21) and the distance of the epicenter from the Pee Dee Lumber Region. According to data provided by the National Geophysical Data Center, the greatest MMI to impact the region was reported on September 1, 1886 with a MMI of VII (very strong) with a correlating Richter Scale measurement of approximately < 6.1. • Anson County: VI • Montgomery County: VII • Richmond County: V • Scotland County: VI				
Geological	Landslide: As noted above in the landslide profile, the landslide data provided by the North Carolina Geological survey is incomplete. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using the USGS landslide susceptibility index, extent can be measured with incidence, which is low. There is also a low to moderate susceptibility throughout the region. Sinkhole: The western part of North Carolina and the Pee Dee Lumber region is susceptible to sinkholes; however, there are no historical records of sinkholes in the region. Erosion: The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records available for the Pee Dee Lumber Region.				
Dam Failure	Dam failure extent is defined using the North Carolina Division of Land Resources criteria (Table 5.24). Of the 176 dams in Pee Dee Lumber Region, 29 are classified as high-hazard. • Anson County: 8 • Montgomery County: 1 • Richmond County: 12 • Scotland County: 8				
Flooding	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 3.3 percent of the total land area in the Pee Dee Lumber Region. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the region was reported on August 17, 1908. Water reached a discharge of 276,000 cubic feet per second and the stream gage height was recorded at 31.3 feet. Additional peak discharge readings and gage heights are in the table below.				
	Location/ Jurisdiction	Date	Peak Discharge (cfs)	Gage Height (ft)	
	Anson County				
	Palmetto Branch at the Town of Ansonville	7/28/1965	556	25	

	South Fork Creek near Town of Morven	2/14/1960	2,080	18.6		
	Brown Creek near Town of Polkton	9/18/1945	17,300	17.7		
	North Fork Creek near Town 6/4/1937 of Wadesboro		2,410	6.4		
	Montgomery County					
	Little River near Town of Star	7/23/1997	15,400	18.6		
	Richmond County					
	Drowning Creek near Town 9/18/1945 of Hoffman		10,900	10.3		
	Pee Dee River hear City of Rockingham	8/1//1908				
	Scotland County					
	Big Shoe Heel Creek near City of Laurinburg	9/10/2004	1,200	5.5		
	Other Ha	zards				
Wildfires	Wildfire data was provided by the North Carolina Division of Forest Resources and is reported annually by county. Analyzing the data by county indicates the following wildfire hazard extent for each county. **Anson County** The greatest number of fires to occur in any year was 68 in 2001. The greatest number of acres to burn in a single year occurred in 2001 when 391 acres were burned. **Montgomery County** The greatest number of fires to occur in any year was 46 in 2008 and 2016. The greatest number of acres to burn in a single year occurred in 2016 when 392 acres were burned. **Richmond County** The greatest number of fires to occur in any year was 142 in 2001. The greatest number of acres to burn in a single year occurred in 2017 when 1,111 acres were burned. **Scotland County** The greatest number of fires to occur in any year was 175 in 2001. The greatest number of acres to burn in a single year occurred in 2016 when 2,681 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are					
Infectious Disease	There is no available method for	_				
intectious Disease	time; however, the ongoing COVID-19 pandemic is demonstrating the staggering costs associated with fighting a global pandemic and the loss of lives continues to grow.					
Technological Hazards						
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the region was 40,000 LGA released on the from a faulty weld on a train car in Hamlet, NC on					

Radiological Emergency - Fixed Nuclear Facilities	 March 3, 1992. It should be noted that larger events are possible. Anson County: 9,528 LGA Montgomery County: 7,500 LGA Richmond County: 40,000 LGA Scotland County: 6,000 LGA Although there is no history of a nuclear accident at the H.B. Robison Steam Electric Station other events across the globe and in the United States in particular indicate that an event is possible. Since several national and international events were Level 7 events on the INES, the potential for a Level 7 event at H.B. Robison is possible.
Terrorism	Although no severe terrorism attacks have been reported in the Pee Dee Lumber region, the entire area is still at risk to a future event. Densely populated areas, such as cities, are considered more susceptible. Terror events have the potential to affect the human population, buildings and infrastructure, and the economy in the region.
Cyber	No cyber-attacks have been historically reported in the South Mountains region. Technology usage, however, is increasing. A cyber-attack could potentially devastate the region's economy and could have lasting negative impacts.
Electromagnetic Pulse	Electromagnetic Pulse (EMP) occurrences have not taken place in the South Mountains region, but the risk still exists. If an EMP were to occur, the effects would negatively impact first responders and communication efforts and may cause panic within the area.

5.19.2 Priority Risk Index

In order to draw some meaningful planning conclusions on hazard risk for the Pee Dee Lumber Region, the results of the hazard profiling process were used to generate countywide hazard classifications according to a "Priority Risk Index" (PRI). The purpose of the PRI is to categorize and prioritize all potential hazards for the Pee Dee Lumber Region as high, moderate, or low risk. Combined with the asset inventory and quantitative vulnerability assessment provided in the next section, the summary hazard classifications generated through the use of the PRI allows for the prioritization of those high hazard risks for mitigation planning purposes, and more specifically, the identification of hazard mitigation opportunities for the Pee Dee Lumber Region to consider as part of their proposed mitigation strategy.

The prioritization and categorization of identified hazards for the Pee Dee Lumber Region is based principally on the PRI, a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI is used to assist the Pee Dee Lumber Regional Hazard Mitigation Planning Committee in gaining consensus on the determination of those hazards that pose the most significant threat to the Pee Dee Lumber counties based on a variety of factors. The PRI is not scientifically based, but is rather meant to be utilized as an objective planning tool for classifying and prioritizing hazard risks in the Pee Dee Lumber Region based on standardized criteria.

The application of the PRI results in numerical values that allow identified hazards to be ranked against one another (the higher the PRI value, the greater the hazard risk). PRI values are obtained by assigning varying degrees of risk to five categories for each hazard (probability, impact, spatial extent, warning time, and duration). Each degree of risk has been assigned a value (1 to 4) and an agreed upon weighting factor³³, as summarized in **Table 5.36**. To calculate the PRI value for a given hazard, the assigned risk value for each category is multiplied by the weighting factor. The sum of all five categories equals the final PRI value, as demonstrated in the example equation below:

PRI VALUE = $[(PROBABILITY \times .30) + (IMPACT \times .30) + (SPATIAL EXTENT \times .20) + (WARNING TIME \times .10) + (DURATION \times .10)]$

According to the weighting scheme and point system applied, the highest possible value for any hazard is 4.0. When the scheme is applied for the Pee Dee Lumber Region, the highest PRI value is 3.3 (winter storm and freeze hazard). Prior to being finalized, PRI values for each identified hazard were reviewed and accepted by the members of the Regional Hazard Mitigation Planning Committee.

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³³ The Regional Hazard Mitigation Planning Committee, based upon any unique concerns or factors for the planning area, may adjust the PRI weighting scheme during future plan updates.

TABLE 5.36: PRIORITY RISK INDEX FOR THE PEE DEE LUMBER REGION

DDI Coto com	Degree of Risk				
PRI Category	Level	Criteria	Index Value	Weighting Factor	
	Unlikely	1			
Probability	Possible	2	200/		
	Likely	3	30%		
Highly Likely		100% annual probability	4		
	Minor	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.	1		
Impact	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2		
	Critical	3	30%		
	Catastrophic	4			
	Negligible	Less than 1% of area affected	1		
Spatial Extent Small		Between 1 and 10% of area affected	2	200/	
Spatial Extent	Moderate	Between 10 and 50% of area affected	3	20%	
	Large	Between 50 and 100% of area affected	4		
	More than 24 hours	Self explanatory	1		
Warning Time	12 to 24 hours Self explanatory		2	400/	
Time	6 to 12 hours	3	10%		
Less than 6 hours		Self explanatory			
	Less than 6 hours	Self explanatory	1	100/	
Duration	Less than 24 hours	Self explanatory	2		
2 3 3 4 4 4 1	Less than one week	3	10%		
	More than one week	4			

5.19.3 Priority Risk Index Results

Table 5.37 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Planning Committee. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE 5.37: SUMMARY OF PRI RESULTS FOR THE PEE DEE LUMBER REGION

	Subhazard(s)	Category/Degree of Risk					
Hazard	Assessed	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
			Natural Haza	rds			
Drought		Likely	Minor	Large	More than 24 hours	More than 1 week	2.5
Excessive Heat		Likely	Minor	Large	More than 24 hours	Less than 1 week	2.4
Hurricane and Coastal Hazards		Likely	Critical	Large	More than 24 hours	Less than 24 hours	2.9
Tornadoes/ Thunderstorms	Hailstorm, Lightning	Highly Likely	Limited	Moderate	6 to 12 hours	Less than 6 hours	2.8
Severe Winter Weather		Likely	Limited	Large	More than 24 hours	Less than 1 week	3.0
Earthquakes		Possible	Minor	Moderate	Less than 6 hours	Less than 6 hours	2.0
Geological	Landslide, Sinkholes, Erosion	Possible	Limited	Small	Less than 6 hours	Less than 6 hours	2.1
Dam Failure		Unlikely	Critical	Moderate	Less than 6 hours	Less than 24 hours	2.4
Flooding		Likely	Critical	Moderate	6 to 12 hours	Less than 1 week	3
			Other Hazar	ds			
Wildfires		Likely	Minor	Small	Less than 6 hours	More than 1 week	2.7
Infectious Disease		Possible	Critical	Moderate	More than 24 hours	More than 1 week	2.5
		Tec	hnological Ha	azards			
Hazardous Substances		Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	2.3
Radiological Emergency	Fixed Nuclear Facilities	Unlikely	Critical	Moderate	6 to 12 hours	Less than 1 week	2.4
Terrorism		Unlikely	Critical	Small	Less than 6 hours	Less than 24 hours	2.6
Cyber		Possible	Critical	Small	Less than 6 hours	Less than 1 week	3
Electromagnetic Pulse		Unlikely	Critical	Large	Less than 6 hours	Less than 1 week	3.1

5.20 FINAL DETERMINATIONS

The conclusions drawn from the hazard profiling process for the Pee Dee Lumber Region, including the PRI results and input from the Regional Hazard Mitigation Planning Committee, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table 5.38**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of the Pee Dee Lumber Region. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately, and is described in Section 6: *Vulnerability Assessment*. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE 5.38: CONCLUSIONS ON HAZARD RISK FOR THE PEE DEE LUMBER REGION

HIGH RISK	Hurricanes and Coastal Hazards Tornadoes/Thunderstorms Flooding
MODERATE RISK	Severe Winter Weather Drought Excessive Heat Wildfires Dam Failure Hazardous Substances Geological Infectious Disease
LOW RISK	Earthquakes Cyber Radiological Emergency Terrorism Electromagnetic Pulse

SECTION 6 VULNERABILITY ASSESSMENT

This section identifies and quantifies the vulnerability of the jurisdictions within the Pee Dee Lumber Region to the significant hazards identified in the previous sections (*Hazard Identification and Profiles*). It consists of the following subsections:

- ♦ 6.1 Overview
- ♦ 6.2 Methodology
- ♦ 6.3 Explanation of Data Sources
- ♦ 6.4 Asset Inventory
- ♦ 6.5 Vulnerability Assessment Results
- ♦ 6.6 Conclusions on Hazard Vulnerability

44 CFR Requirement

44 CFR Part 201.6(c)(2)(ii): The risk assessment shall include a description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. The description shall include an overall summary of each hazard and its impact on the community. The plan should describe vulnerability in terms of: (A) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; (B) An estimate of the potential losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate; (C) Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

6.1 OVERVIEW

This section builds upon the information provided in Section 4: *Hazard Identification and* Section 5: *Hazard Profiles* by identifying and characterizing an inventory of assets in the Pee Dee Lumber Region. Additionally, an assessment is conducted for each identified hazard, including the potential impact and expected amount of damages it may cause. The primary objective of the vulnerability assessment is to quantify exposure and the potential loss estimates for each hazard. In doing so, each county and their participating jurisdictions may better understand their unique risks to identified hazards and be better prepared to evaluate and prioritize specific hazard mitigation actions.

This section begins with an explanation of the methodology applied to complete the vulnerability assessment, followed by a summary description of the asset inventory as compiled for jurisdictions in the

Pee Dee Lumber Region. The remainder of this section focuses on the results of the assessment conducted.

6.2 METHODOLOGY

This vulnerability assessment was conducted using two distinct methodologies: (1) a geographic information system (GIS)-based analysis; and (2) a risk modeling software analysis. Each approach provides estimates for the potential impact of hazards by using a common, systematic framework for evaluation. A brief description of the two different approaches is provided on the following pages.

6.2.1 GIS-Based Analysis

Other hazards have specified geographic boundaries that permit additional analysis using Geographic Information Systems (GIS). These hazards include:

- Flooding
- Hazardous Substances
- Geological (Landslide)
- Wildfires

The objective of the GIS-based analysis was to determine the estimated vulnerability of critical facilities and populations for the identified hazards in the Pee Dee Lumber Region using best available geospatial data. Digital data was collected from local, regional, state, and national sources for hazards and buildings. This included local tax assessor records for individual parcels and buildings and georeferenced point locations for identified assets (critical facilities and infrastructure, special populations, etc.) when available. ESRI® ArcGIS™ 10.6.1 was used to assess hazard vulnerability utilizing digital hazard data, as well as local building data. Using these data layers, hazard vulnerability can be quantified by estimating the assessed building value for parcels and/or buildings determined to be located in identified hazard areas. To estimate vulnerable populations in hazard areas, digital Census 2010 data by census tract was obtained and was supplemented with current population estimates from the US Census Bureau. This was intersected with hazard areas to determine exposed population counts. Unfortunately, due to the large scale of census tracts, the results are limited, but will be revised as population by census block becomes available for all areas in the region. The results of the analysis provided an estimate of the number of people and critical facilities, as well as the assessed value of parcels and improvements, determined to be potentially at risk to those hazards with delineable geographic hazard boundaries.

6.2.2 Risk Management Tool

The Risk Management Tool (RMT) was developed by NCEM-Risk Management (RM) as a tool to simplify hazard mitigation plan development into a single, automated, tool-based format to include geospatially based risk assessment data, also developed by NCEM-RM. The RMT is a twofold system used to create and/or update a local and state hazard mitigation plan. The two parts of the RMT are a step-by-step system that will prompt a user to input information and narrative as well as upload pictures, documents and other information as needed. The second part of the system is the Risk Tool. The Risk Tool will run a risk assessment at the building level for certain hazards selected based on predetermined calculations for each hazard. Some hazards will have a single return period and others have multi-return periods. The

availability of multi-returns periods are based on the availability of datasets for each hazard and the degree of detail in each dataset.

The Risk Assessment produced by the Risk Tool will also identify high-risk structures in the planning area and estimate cost by types of mitigation projects (wind retrofits, elevation, acquisition, mitigation reconstruction) and benefit-cost estimates by type of mitigation. The mitigation tool is only meant to begin the process of thinking about problem areas where mitigation may be of interest to the jurisdiction and property owners. It is also designed to drive mitigation actions that are specific, measurable, attainable, realistic and timely.

Finally, the Risk Management Tool also assesses vulnerable populations, such as children and elderly persons. Data used to assess these populations is from the US 2010 Census. According to the US Census Bureau, those defined as "elderly," are 65 years old or older, while those defined as "children" are 5 years old or younger. It is important to note that the numbers assessed are from the most recent Census in 2010.

Once all of the information was input into the system, a hazard mitigation plan can then be exported into multiple document formats. The system will also store the plan so that when it is time to update the plan, the information is already in the system.

The RMT was originally developed as part of the Integrated Hazard Risk Management (IHRM) pilot project which included Durham, Edgecombe, Macon and New Hanover counties. The pilot was successful and it was determined that there is a need and interest in a system designed to be used statewide and potentially nationwide in the future. The RMT used in this update was the second version created by NCEM.

A list of the hazards assessed by the RMT follows:

- Hurricane and Coastal Hazards
- Tornadoes/Thunderstorms
- Earthquakes
- Flooding
- Wildfires

All conclusions are presented in "Conclusions on Hazard Vulnerability" at the end of this section.

Hazard Prioritization

When it comes to evaluating hazards and determining which hazards a jurisdiction should spend the most time and effort addressing, a number of factors affect the prioritization. As discussed in *Section 5: Hazard Profiles*, the risk (magnitude, probability, location) of a hazard is one of the primary driving forces that helps determine the relative importance of addressing the potential impacts of a hazard. However, the assessment of a hazard's risk is generally focused on the hazard itself and how severe or likely it could be within geographic scope of the study area. This assessment does not necessarily analyze the potential effects of that hazard on humans and the built environment. This is a critical component of planning for hazards since a hazard that does not impact human life, safety, or welfare is typically not considered as important to address through mitigation. The analysis that follows attempts to bring this consideration into the planning process by estimating the impacts on humans and the built environment and prioritizing hazards accordingly.

6.3 EXPLANATION OF DATA SOURCES

Hurricane and Coastal Hazards

NCEM's Risk Management Tool assessed vulnerable areas to the Hurricane and Coastal Hazards. For this assessment, vulnerable buildings and populations were analyzed against damages caused by hurricane winds.

Tornadoes/Thunderstorms

NCEM's Risk Management Tool analyzed the vulnerable buildings and populations to the Tornadoes/Thunderstorms hazard. Sub hazards assessed under the thunderstorms hazard include hail and lightning; however, for the purposes of this assessment, thunderstorm winds were the only risk analyzed.

Earthquakes

NCEM's Risk Management Tool assessed vulnerable areas to the earthquake hazard. This assessment included susceptible buildings by the type of structure, and the potential dollar losses associated with the buildings. It also analyzed susceptible populations, such as children and elderly.

Geological (Landslide)

Data from the U.S. Geological Survey was used to first determine what areas are considered high, moderate, or low susceptibility areas to the landslide hazard. Data was downloaded in an ArcGIS compatible format. This allowed the parcel data received by local governments to be layered on top of the landslide regions to assess vulnerability to landslide occurrences.

Flooding

FEMA Digital Flood Insurance Rate Maps (DFIRMs) were used to determine flood vulnerability. DFIRM data can be used in ArcGIS for mapping purposes and, they identify several features including floodplain boundaries and base flood elevations. Identified areas on the DFIRM represent some features of a Flood Insurance Rate Maps including the 100-year flood areas (1.0-percent annual chance flood), and the 500-year flood areas (0.2-percent annual chance flood). For the vulnerability assessment, local parcel data and critical facilities were overlaid on the 100-year floodplain areas and 500-year floodplain areas. This data was also supplemented with the NCEM RMT data, which assessed structure type and vulnerable populations within the floodplain areas. It should be noted that such an analysis does account for building elevation.

Wildfires

The data used to determine vulnerability to wildfires in the Pee Dee Lumber Region is based on GIS data called the Southern Wildfire Risk Assessment (SWRA). It was provided for use in this plan by the North Carolina Division of Forest Resources. A specific layer known as the "Wildland Urban Interface" (WUI) was used to determine vulnerability of people and property. This layer uses the key input of housing density to define potential wildfire impacts to people and homes. The WUI Risk Index is then derived from a scale of -1 to -9, with the least negative impact being a -1, and uses flame length to measure fire intensity. The primary purpose of this data is to highlight areas of concern that may be conducive to mitigation actions. Many assumptions are made, making it not a true probability; however, it does provide a comparison of

risk throughout the region. Data was also supplemented with the data from NCEM's RMT, which assessed vulnerable buildings, potential dollar losses of those buildings, and susceptible populations.

Hazardous Substances

Hazardous materials incidents can occur in both fixed facilities and through mobile transportation. For the fixed incident analysis, Toxic Release Inventory (TRI) data was used. The Toxic Release Inventory is a publicly available database from the federal Environmental Protection Agency (EPA) that contains information on toxic chemicals, releases, and other waste management activities reported annually by certain covered industry groups, as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and was further expanded by the Pollution Prevention Act of 1990. Facilities that meet certain activity thresholds must annually report their releases and other waste management activities for listed toxic chemicals to the EPA and to their state or tribal entity. A facility must report if it meets the following criteria:

- The facility falls within one of the following industrial categories: manufacturing; metal mining; coal mining; electric generating facilities that combust coal and/or oil; chemical wholesale distributors; petroleum terminals and bulk storage facilities; RCRA Subtitle C treatment, storage, and disposal (TSD) facilities; and solvent recovery services;
- ♦ Has 10 or more full-time employee equivalents; and
- Manufactures or processes more than 25,000 pounds or otherwise uses more than 10,000 pounds
 of any listed chemical during the calendar year. Persistent, bioaccumulative, and toxic (PBT)
 chemicals are subject to different thresholds of 10 pounds, 100 pounds, or 0.1 grams depending
 on the chemical.

For the mobile hazardous materials incident analysis, transportation data including major highways and railroads were obtained from the North Carolina Department of Transportation. This data is ArcGIS compatible, lending itself to buffer analysis to determine risk.

6.4 ASSET INVENTORY

An inventory of geo-referenced assets within Anson, Montgomery, Richmond, and Scotland Counties and jurisdictions was compiled in order to identify and characterize those properties potentially at risk to the identified hazards¹. By understanding the type and number of assets that exist and where they are located in relation to known hazard areas, the relative risk and vulnerability for such assets can be assessed. Under this assessment, two categories of physical assets were created and then further assessed through GIS analysis. Additionally, social assets are addressed to determine population at risk to the identified hazards. These are presented below in Section 6.4.2.

6.4.1 Physical and Improved Assets

The two categories of physical assets consist of:

1. <u>Improved Property</u>: Includes all improved properties in the Pee Dee Lumber Region according to local parcel data provided by the counties. The information has been expressed in terms of the number of

¹ While potentially not all-inclusive for the jurisdictions in the Pee Dee Lumber region, "georeferenced" assets include those assets for which specific location data is readily available for connecting the asset to a specific geographic location for purposes of GIS analysis.

parcels and total assessed value of improvements (buildings) that may be exposed to the identified hazards.

2. <u>Critical Facilities</u>: Critical facilities vary by jurisdiction. Each county provided data from their respective critical facilities that were used in this section. Identified critical facilities are fire stations, police stations, medical care facilities, schools, government facilities, emergency operation centers, or other important buildings. It should be noted that this listing is not all-inclusive for assets located in the region, but it is anticipated that it will be expanded during future plan updates as more geo-referenced data becomes available for use in GIS analysis.

The following tables provide a detailed listing of the geo-referenced assets that have been identified for inclusion in the vulnerability assessment for the Pee Dee Lumber Region.

Table 6.1 lists the number of parcels, total value of parcels, total number of parcels with improvements, and the total assessed value of improvements for participating areas of the Pee Dee Lumber Region (study area of vulnerability assessment)².

TABLE 6.1: IMPROVED PROPERTY IN THE PEE DEE LUMBER REGION

	Number of	Total Assessed	Estimated Number	Total Assessed Value
Location ³	Parcels	Value of Parcels	of Buildings	of Improvements
Anson County	22,835	\$2,026,862,900	10,078	\$1,114,860,400
Ansonville	499	\$18,653,200	278	\$10,790,000
Lilesville	328	\$10,857,500	202	\$3,580,800
McFarlan	82	\$2,521,100	43	\$2,556,200
Morven	390	\$10,210,400	225	\$4,235,600
Peachland	318	\$12,433,500	199	\$5,703,400
Polkton	555	\$18,002,300	293	\$10,336,100
Wadesboro	3,162	\$130,134,800	1,937	\$28,773,600
Unincorporated Area	17,501	\$1,824,050,100	6,901	\$1,048,884,700
Montgomery County	30,171	\$1,107,577,801	15,949	\$1,972,706,781
Biscoe	862	\$21,239,807	614	\$78,524,874
Candor	523	\$6,842,697	334	\$34,643,840
Mount Gilead	1,031	\$9,933,685	548	\$59,507,004
Star	535	\$7,685,329	372	\$38,152,415
Troy	1,513	\$30,264,966	1,003	\$144,070,146
Unincorporated Area	25,707	\$1,031,611,317	13,078	\$1,617,808,502
Richmond County	32,275	\$757,117,727	17,178	\$1,757,431,308
Dobbins Heights	881	\$2,516,297	339	\$12,441,215
Ellerbe	680	\$5,714,804	377	\$30,066,412
Hamlet	3,423	\$36,420,868	2,294	\$217,590,985
Hoffman	346	\$4,708,362	149	\$10,064,932
Norman	129	\$812,326	74	\$4,085,821
Rockingham	4,731	\$125,238,824	3,497	\$516,824,244

² Total assessed values for improvements is based on tax assessor records as joined to digital parcel data. This data does not include dollar figures for tax-exempt improvements such as publicly-owned buildings and facilities. It should also be noted that, due to record keeping, some duplication is possible thus potentially resulting in an inflated value exposure for an area.

³ Number of buildings for each county is based on the number of parcels with an improved building value greater than zero.

Location ³	Number of Parcels	Total Assessed Value of Parcels	Estimated Number of Buildings	Total Assessed Value of Improvements
Unincorporated Area	22,085	\$581,706,246	10,448	\$966,357,699
Scotland County	21,654	\$523,102,730	14,381	\$1,616,774,780
East Laurinburg	178	\$807,830	144	\$5,606,280
Gibson	296	\$2,344,010	197	\$13,217,340
Laurinburg	7,488	\$149,579,150	5,520	\$713,828,660
Wagram	581	\$4,651,860	369	\$31,462,290
Unincorporated Area	13,111	\$365,719,880	8,151	\$852,660,210
Pee Dee Lumber Regional Total	106,935	\$4,414,661,158	47,508	\$5,346,912,869

Source: Local governments

The following table lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, schools, and other critical facilities located in the Pee Dee Lumber Region. Local governments at the county level provided a majority of the data for this analysis. In addition, **Figure 6.1** shows the locations of essential facilities in the Pee Dee Lumber Region. **Table 6.25**, at the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all inclusive and only includes information provided by the counties.

TABLE 6.2: CRITICAL FACILITY INVENTORY

Location	Fire/EMS Stations	Law Enforcement	Medical Facilities	Public Schools	Other
Anson County	15	4	12	11	1
Ansonville	2	0	0	1	0
Lilesville	2	1	0	1	0
McFarlan	0	0	0	0	0
Morven	1	1	0	0	0
Peachland	2	0	0	0	0
Polkton	1	0	0	1	0
Wadesboro	3	2	12	5	1
Unincorporated Area	4	0	0	3	0
Montgomery County	22	8	24	11	1
Biscoe	2	1	3	0	0
Candor	1	1	3	1	0
Mount Gilead	2	1	4	1	0
Star	2	1	2	1	0
Troy	3	3	7	2	1
Unincorporated Area	12	1	5	6	0
Richmond County	30	4	25	19	1
Dobbins Heights	0	0	0	0	0
Ellerbe	3	0	1	1	0
Hamlet	2	2	8	4	0
Hoffman	2	0	1	0	0
Norman	0	0	0	0	0
Rockingham	5	2	18	3	1
Unincorporated Area	18	0	7	11	0
Scotland County	18	4	35	14	1
East Laurinburg	0	0	0	1	0
Gibson	2	0	2	0	0
Laurinburg	7	3	21	7	1
Wagram	2	1	2	1	0
Unincorporated Area	7	0	10	5	0
Pee Dee Lumber Regional Total	85	20	96	55	4

Source: Local governments

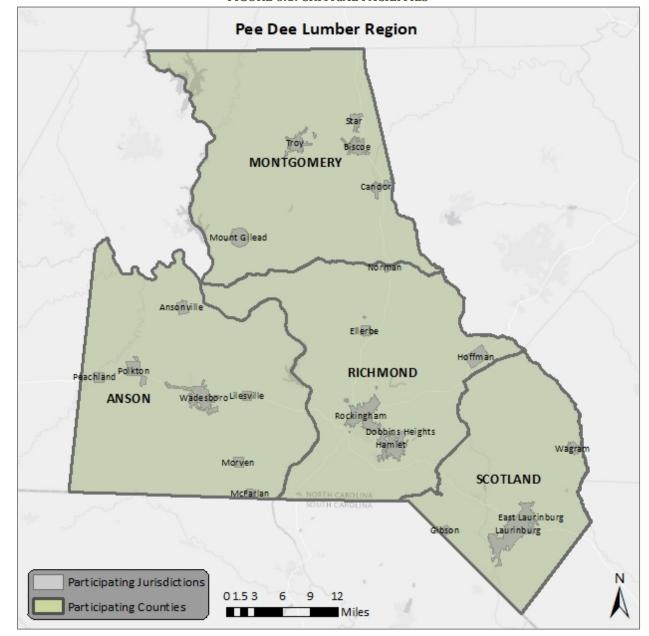


FIGURE 6.1: CRITICAL FACILITIES

Source: Local governments

6.4.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in the Pee Dee Lumber Region that are potentially at risk to these hazards.

Table 6.3 lists the population by county according to U.S. Census 2010 population estimates. The population estimates are updated using the most recent vintage tables dated July 1, 2018. The total population in the Pee Dee Lumber Region according to Census data is 131,631.

TABLE 6.3: TOTAL POPULATION IN THE PEE DEE LUMBER REGION

Location	2019 Population Estimates
Anson County	24,446
Montgomery County	27,173
Richmond County	45,189
Scotland County	34,823
Pee Dee Lumber Regional Total	131,631

Source: US Census Bureau

Additional population estimates are presented in Section 3: Community Profile.

In addition, **Figure 6.2** illustrates the population density by census tract as it was reported by the US Census Bureau in 2010 and updated with 2017 population estimates.

FIGURE 6.2: POPULATION DENSITY IN THE PEE DEE LUMBER REGION Pee Dee Lumber Region - Population Density Participating Jurisdictions Participating Counties Star Population per Bisco e Square Mile MONTGOMERY 0-75 Cando 76 - 300 301 - 600 601 - 1200 Mount Gilead 1201 - 2000 Norman 2001 - 3750 Ellerbe Hoffm a RICHMOND ANSON Wadesboro Lilesville Rockingham Dobbins Heights Hamlet Wagn Morven SCOTLAND Laurinburg 12 16 0 2 4 8 Miles

6.4.3. Development Trends and Changes in Vulnerability

Since the previous regional hazard mitigation plan was approved (in 2018), the Pee Dee Lumber Region has experienced some new evelopment. **Table 6.4** shows the number of building units constructed since 2010 according to the US Census American Community Survey.

TABLE 6.4: BUILDING COUNTS FOR THE PEE DEE LUMBER REGION

TREEL O.T. D	Tatal Hausing Haits		Of Puilding Charle Built		
Location	Total Housing Units	Units Built 2010 or	% Building Stock Built		
	(2019)	Later	Post-2010		
Anson County	11,594	267	2.3%		
Ansonville	362	0	0.0%		
Lilesville	201	1	0.5%		
McFarlan	68	0	0.0%		
Morven	274	0	0.0%		
Peachland	214	0	0.0%		
Polkton	638	0	0.0%		
Wadesboro	2,444	30	1.2%		
Unincorporated Area	7,393	236	3.2%		
Montgomery County	16,235	396	2.4%		
Biscoe	821	3	0.4%		
Candor	381	12	3.1%		
Mount Gilead	620	0	0.0%		
Star	414	12	2.9%		
Troy	1,473	0	0.0%		
Unincorporated Area	12,526	369	2.9%		
Richmond County	21,380	620	2.9%		
Dobbins Heights	516	0	0.0%		
Ellerbe	428	0	0.0%		
Hamlet	2,866	8	0.3%		
Hoffman	295	0	0.0%		
Norman	74	0	0.0%		
Rockingham	4,337	135	3.1%		
Unincorporated Area	12,864	477	3.7%		
Scotland County	15,295	381	2.5%		
East Laurinburg	141	0	0.0%		
Gibson	255	3	1.2%		
Laurinburg	6,928	122	1.8%		
Wagram	391	7	1.8%		
Unincorporated Area	7,580	249	3.3%		
Pee Dee Lumber Regional Total	64,504	1,664	2.6%		

Source: US Census Bureau

Table 6.5 shows population growth estimates for the region from 2010 to 2018 based on the US Census Annual Estimates of Resident Population and 2018 population estimates.

TABLE 6.5: POPULATION GROWTH FOR THE PEE DEE LUMBER REGION

Location	2010	2013	2016	2019	% Change 2010- 2019
Anson County	26,852	25,957	25,165	24,446	-9.0%
Ansonville	1,723	1,748	1,733	1,843	7.0%
Lilesville	3,791	3,034	3,043	2,749	-27.5%
McFarlan	117	113	110	109	-6.8%
Morven	1,661	2,494	2,340	1,588	-4.4%
Peachland	503	514	397	496	-1.4%
Polkton	3,270	3,342	3,379	3,187	-2.5%
Wadesboro	8,462	8,871	8,406	90,39	6.8%
Unincorporated Area	7,325	5,841	5,757	5,435	-25.8%
Montgomery County	27,729	27,446	27,301	27,173	-2.0%
Biscoe	5,647	5,921	6,139	6,474	14.6%
Candor	863	726	886	1,097	27.1%
Mount Gilead	1,834	1,685	1,123	1,161	-36.7%
Star	1,030	822	751	830	-19.4%
Troy	3,219	3,437	3,430	3,348	4.0%
Unincorporated Area	15,136	14,855	14,972	14,263	-5.8%
Richmond County	46,477	46,534	45,710	45,189	-2.8%
Dobbins Heights	767	646	875	928	21.0%
Ellerbe	914	1,400	1,004	862	-5.7%
Hamlet	6,420	6,572	6,500	6,362	-0.9%
Hoffman	548	558	687	693	26.5%
Norman	87	156	107	98	12.6%
Rockingham	9,524	9,530	9,289	8,994	-5.6%
Unincorporated Area	28,217	27,672	27,248	27,252	-3.4%
Scotland County	36,063	35,911	35309	34,823	-3.4%
East Laurinburg	303	295	284	279	-7.9%
Gibson	539	526	509	501	-7.1%
Laurinburg	15,904	15,609	15,316	15,251	-4.1%
Wagram	838	817	792	777	-7.3%
Unincorporated Area	18,479	18,664	18,408	18,015	-2.5%
Pee Dee Lumber Regional Total	137,121	135,848	133,485	131,631	-4.0%

Source: US Census Bureau

Based on the above data, the rate of residential development and population growth in the region since 2010 has decreased for all counties, most dramatically in Anson County. Changes in development patterns do impact the region's vulnerability since the last update, but the population loss indicates that growth in the region is not straining the region. It should be noted that if future development occurs in vulnerable areas, populations and infrastructure will be exposed to potential hazards. The greater the population, the greater the risk is that persons are impacted by hazards.

6.5 VULNERABILITY ASSESSMENT RESULTS

As noted earlier, only hazards with a specific geographic boundary, modeling tool, or sufficient historical data allow for further analysis. Those results are presented here. All other hazards are assumed to impact the entire planning region (drought, excessive heat, hailstorm, lightning, and severe winter weather) or, due to lack of data, analysis would not lead to credible results (sinkholes, erosion, dam failure, infectious disease, terrorism, cyber, EMP). The total region exposure for critical facilities is presented in **Table 6.25**.

The hazards presented in this subsection include: hurricane and coastal hazards, tornadoes/thunderstorms, earthquakes, landslides, flooding, wildfires, and hazardous substances.

6.5.1. Hurricane and Coastal Hazards

Historical evidence indicates that the Pee Dee Lumber Region has a significant risk to the hurricane and tropical storm hazard, mostly due to the location of the state of North Carolina as a coastal state. Since 1989, there have been seven disaster declarations from hurricanes in the region (Hurricane Hugo, Hurricane Fran, Hurricane Floyd, Tropical Storm Frances, Hurricane Matthew, Hurricane Florence and Tropical Storm Michael). Many more storm tracks have come near or traversed through the region, as shown and discussed in Section 5: *Hazard Profiles*.

Numerous secondary hazards, such as erosion, flooding, tornadoes, and high winds, tend to be a result of hurricanes or tropical storms. These cumulative effects often make potential loss estimates difficult to calculate and track.

NCEM's Risk Management Tool analyzes hurricane winds and no other hazards often associated with hurricanes; therefore, only hurricane winds are analyzed in this section. Building and population vulnerabilities to hurricane winds in a 100-year frequency event (return period) are reported in the following **Table 6.6** and **Table 6.7**.

It is assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard.

TABLE 6.6: BUILDING VULNERABILITIES TO HURRICANE WINDS

Location	Pre-Firm Buildings		ntial Buildings at Commercial Buildings Public Buildings at Risk Total Buildings at Risk		Public Buildings at Risk		ildings at Risk		
	at Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages
Anson County	12,275	11,194	405,043,171	2,330	433,527,974	388	367,944,147	13,912	\$1,206,515,29 3
Ansonville	199	171	\$18,665,335	16	\$10,087,782	13	\$12,947,516	200	\$41,700,634
Lilesville	244	204	\$20,505,320	24	\$5,251,035	16	\$21,150,504	244	\$46,906,859
McFarlan	56	46	\$4,867,418	8	\$1,672,695	2	\$852,942	56	\$7,393,056
Morven	230	185	\$20,542,842	35	\$10,262,687	10	\$8,479,663	230	\$39,285,192
Peachland	233	225	\$20,575,340	19	\$5,095,280	12	\$8,469,573	256	\$34,140,193
Polkton	446	315	\$29,767,896	56	\$41,769,887	75	\$97,276,009	446	\$168,813,791
Wadesboro	2,710	2,329	\$273,741,63 3	284	\$353,457,71 7	101	\$215,598,90 4	2,714	\$842,798,254
Unincorporated Area	8,157	7,719	16,377,387	1,888	5,930,891	159	3,169,036	9,766	\$25,477,314
Montgomery County	1738	1927	244212230	148	117346229	44	43146666	2119	\$404,705,127

Location	Pre-Firm Buildings		al Buildings at Risk		cial Buildings t Risk	Public Bui	ildings at Risk	Total Bu	ildings at Risk
	at Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages
Biscoe	61	53	\$7,238,849	8	\$4,553,012	1	\$9,347,389	62	\$21,139,249
Candor	504	465	\$58,754,152	31	\$54,186,421	11	\$7,910,606	507	\$120,851,179
Mount Gilead	0	0	\$0	0	\$0	0	\$0	0	\$0
Star	168	153	\$16,382,621	10	\$4,439,619	5	\$1,137,023	168	\$21,959,264
Troy	190	167	\$24,041,524	14	\$24,527,964	9	\$12,068,146	190	\$60,637,635
Unincorporated Area	815	1,089	137,795,084	85	29,639,213	18	12,683,502	1,192	\$180,117,800
Richmond County	18,905	17,446	2,199,731,2 74	1,611	1,276,387,1 67	632	639,664,859	19,689	4,115,783,30 1
Dobbins Heights	219	213	\$23,256,808	3	\$428,135	7	\$3,096,637	223	\$26,781,579
Ellerbe	380	328	\$33,413,729	27	\$15,029,143	28	\$15,903,061	383	\$64,345,933
Hamlet	3,345	3,157	\$411,696,96 4	144	\$198,427,89 9	100	\$137,790,71 2	3,401	\$747,915,575
Hoffman	214	198	\$18,481,913	9	\$2,229,187	9	\$7,789,331	216	\$28,500,432
Norman	96	70	\$6,835,097	14	\$2,334,953	13	\$4,864,810	97	\$14,034,860
Rockingham	5,023	4,571	\$640,223,47 8	355	\$664,349,29 5	179	\$237,951,16 5	5,105	\$1,542,523,9 39
Unincorporated Area	9,628	8,909	1,065,823,2 85	1,059	393,588,555	296	232,269,143	10,264	\$1,691,680,9 83
Scotland County	10,533	12,261	1,608,604,2 93	1,784	1,467,822,3 76	332	524,628,330	14,377	3,601,055,00 0
East Laurinburg	43	34	\$3,081,878	7	\$4,069,596	2	\$2,636,737	43	\$9,788,210
Gibson	110	98	\$15,140,787	4	\$1,023,443	8	\$3,494,001	110	\$19,658,231
Laurinburg	4,838	4,966	\$810,201,00 3	436	\$521,982,35 9	137	\$211,446,92 6	5,539	\$1,543,630,2 89
Wagram	400	350	\$46,969,780	24	\$8,189,172	26	\$24,893,829	400	\$80,052,782
Unincorporated Area	5,142	6,813	733,210,845	1,313	932,557,806	159	282,156,837	8,285	\$1,947,925,4 88
Pee Dee Lumber Regional Total	43,451	42,828	\$4,457,590, 968	5,873	\$3,295,083, 746	1,396	\$1,575,384, 002	50,097	\$9,328,058,7 21

TABLE 6.7: POPULATION VULNERABILITIES TO HURRICANE WINDS

Location	Elderly at Risk	Children at Risk	Total at Risk					
Anson County	5,053	2,045	35,197					
Ansonville	57	23	397					
Lilesville	74	30	517					
McFarlan	17	7	117					
Morven	53	21	369					
Peachland	59	23	405					
Polkton	344	140	2,397					
Wadesboro	840	340	5,851					

Location	Elderly at Risk	Children at Risk	Total at Risk
Unincorporated Area	2,165	877	15,091
Montgomery County	3115	1234	19836
Biscoe	22	9	140
Candor	177	70	1,126
Mount Gilead	0	0	0
Star	44	17	281
Troy	68	27	434
Unincorporated Area	2,493	988	15,874
Richmond County	8,090	3,744	56,389
Dobbins Heights	51	23	354
Ellerbe	95	44	663
Hamlet	1,040	482	7,249
Hoffman	63	29	440
Norman	11	5	73
Rockingham	1,374	636	9,581
Unincorporated Area	2,822	1,306	19,669
Scotland County	5,819	2,954	42,819
East Laurinburg	9	5	66
Gibson	29	15	212
Laurinburg	1,688	857	12,424
Wagram	97	49	712
Unincorporated Area	2,173	1,102	15,991
Pee Dee Lumber Regional Total	22,077	9,977	154,241

SOCIAL VULNERABILITY

Given the equal susceptibility across the entire Pee Dee Lumber Region, it can be assumed that the entire population is at risk to the hurricane and tropical storm hazard.

CRITICAL FACILITIES

Given equal vulnerability across the Pee Dee Lumber Region, all critical facilities are considered to be at risk. Although some buildings may perform better than others in the face of such an event due to construction, age, and other factors, determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation actions for vulnerable structures, including critical facilities, to reduce the impacts of the hurricane wind hazard. A list of specific critical facilities and their associated risk can be found in **Table 6.25** at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in the Pee Dee Lumber Region. Hurricane events can cause substantial damage in their wake including fatalities, extensive debris clean-up, and extended power outages.

6.5.2 Tornadoes/Thunderstorms

Tornadoes

A probabilistic scenario was created to estimate building and population vulnerabilities in the Pee Dee Lumber region for the tornado hazard. For this scenario, a tornado ranked F2 on the Fujita scale was analyzed. The Risk Management Tool analyzed this information which has been reported in **Table 6.8** and **Table 6.9**.

TABLE 6.8: BUILDING VULNERABILITY TO THE TORNADOES HAZARD

Location	Pre-Firm Buildings at	Reside	ntial Buildings at Risk	Comme	ercial Buildings at Risk	Public	Buildings at Risk	Total	Buildings at Risk
Location	Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages
Anson County	13,124	11,818		2,529	\$816,580,341	428	\$321,055,608	14,775	\$2,320,929,584
Ansonville	315	270	\$22,896,793	26	\$10,057,799	20	\$10,273,967	316	\$43,228,559
Lilesville	251	211	\$18,328,246	24	\$3,438,644	16	\$12,286,054	251	\$34,052,944
McFarlan	56	46	\$4,167,836	8	\$1,075,463	2	\$517,659	56	\$5,760,957
Morven	328	253	\$22,060,873	55	\$8,656,644	20	\$9,120,864	328	\$39,838,382
Peachland	255	242	\$19,246,149	25	\$4,440,020	13	\$5,329,413	280	\$29,015,581
Polkton	516	374	\$28,421,044	63	\$36,947,152	79	\$59,740,555	516	\$125,108,751
Wadesboro	3,243	2,697	\$259,382,433	431	\$316,417,594	119	\$136,493,631	3,247	\$712,293,659
Unincorporated Area	8,160	7,725	\$808,790,260	1,897	\$435,547,025	159	\$87,293,465	9,781	\$1,331,630,751
Montgomery County	12488	16430	\$1,740,968,847	1332	\$789,356,790	342	\$196,028,696	18104	\$2,726,354,334
Biscoe	1,127	957	\$86,447,604	136	\$118,715,180	44	\$30,695,836	1,137	\$235,858,620
Candor	775	683	\$71,499,814	79	\$67,495,227	16	\$8,668,023	778	\$147,663,064
Mount Gilead	972	849	\$83,118,333	111	\$86,511,595	21	\$9,396,550	981	\$179,026,479
Star	1,008	891	\$81,679,335	98	\$58,677,846	21	\$7,595,875	1,010	\$147,953,056
Troy	2,038	1,715	\$158,556,119	249	\$155,557,872	82	\$81,967,343	2,046	\$396,081,334
Unincorporated Area	6,568	11,335	\$1,259,667,642	659	\$302,399,070	158	\$57,705,069	12,152	\$1,619,771,781
Richmond County	26,461	23,708	\$2,409,120,009	2,659	\$1,352,059,992	1,009	\$535,992,037	27,376	\$4,297,172,038
Dobbins Heights	463	437	\$37,153,946	9	\$1,020,594	22	\$5,039,483	468	\$43,214,023
Ellerbe	608	498	\$42,474,796	82	\$25,969,037	36	\$11,448,055	616	\$79,891,888
Hamlet	4,481	4,144	\$447,606,899	268	\$189,910,404	153	\$108,575,110	4,565	\$746,092,413
Hoffman	291	266	\$19,788,845	12	\$2,468,707	14	\$5,713,701	292	\$27,971,253
Norman	134	98	\$8,416,238	22	\$2,624,600	15	\$3,101,155	135	\$14,141,993
Rockingham	8,082	7,168	\$774,635,419	711	\$687,664,606	329	\$213,886,310	8,208	\$1,676,186,335
Unincorporated Area	12,402	11,097	\$1,079,043,866	1,555	\$442,402,044	440	\$188,228,223	13,092	\$1,709,674,133
Scotland County	14,333	15,756	\$1,665,076,114	2,387	\$1,498,738,476	458	\$399,153,220	18,601	\$3,562,967,808
East Laurinburg	168	155	\$13,918,739	10	\$3,521,234	3	\$2,457,532	168	\$19,897,505
Gibson	295	246	\$30,671,707	35	\$10,935,143	14	\$4,258,935	295	\$45,865,785
Laurinburg	7,400	7,320	\$891,977,942	756	\$584,802,335	230	\$201,034,232	8,306	\$1,677,814,508
Wagram	455	393	\$43,203,297	31	\$6,966,095	31	\$16,733,260	455	\$66,902,651
Unincorporated Area	6,015	7,642	\$685,304,429	1,555	\$892,513,669	180	\$174,669,261	9,377	\$1,752,487,359
Pee Dee Lumber Regional Total	66,406	67,712	\$6,998,458,604	8,907	\$4,456,735,599	2,237	\$1,452,229,561	78,856	\$12,907,423,764

Source: NCEM Risk Management Tool

TABLE 6.9: POPULATION VULNERABILITY TO THE TORNADOES HAZARD

Location	Elderly at Risk	Children at Risk	Total at Risk
Anson County	2,167	878	15,103
Ansonville	90	36	627
Lilesville	77	31	535
McFarlan	17	7	117
Morven	72	29	505
Peachland	63	25	436
Polkton	408	166	2,846
Wadesboro	972	394	6,774
Unincorporated Area	468	190	3,263
Montgomery County	4,363	1,729	27,784
Biscoe	399	158	2,540
Candor	260	103	1,657
Mount Gilead	257	102	1,638
Star	253	100	1,612
Troy	701	278	4,463
Unincorporated Area	2,493	988	15,874
Richmond County	6,691	3,097	46,635
Dobbins Heights	104	48	726
Ellerbe	144	67	1,005
Hamlet	1,365	632	9,512
Hoffman	85	39	591
Norman	15	7	102
Rockingham	2,156	998	15,030
Unincorporated Area	2,822	1,306	19,669
Scotland County	4,888	2,481	35,974
East Laurinburg	41	21	299
Gibson	72	37	533
Laurinburg	2,490	1,264	18,328
Wagram	109	55	800
Unincorporated Area	2,176	1,104	16,014
Pee Dee Lumber Regional Total	18,109	8,185	125,496

A map of historical tornado points of origin and paths can be seen below in Figure 6.3.

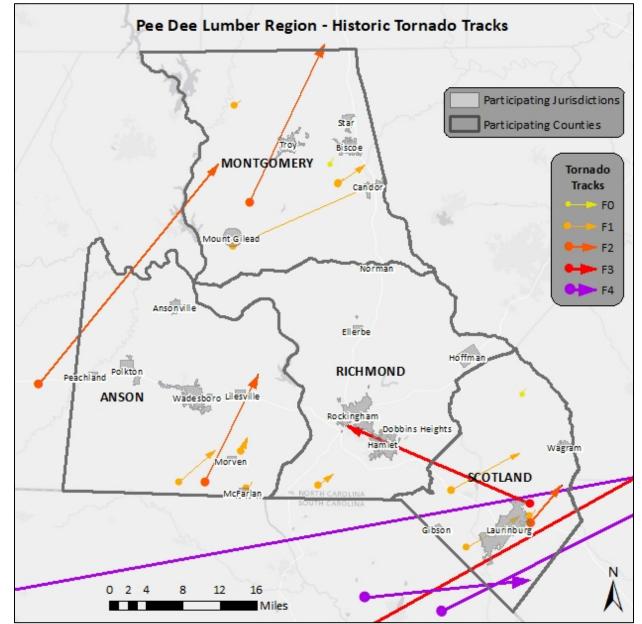


FIGURE 6.3: HISTORICAL TORNADO TRACKS

Source: NOAA

Thunderstorms

A probabilistic scenario was created to estimate building and population vulnerabilities in the Pee Dee Lumber region for the thunderstorm hazard. For this scenario, damages due to thunderstorm winds on a 50-year frequency event (return period) were analyzed. It is important to note that this data does not include damages caused by other remnants of thunderstorms, such as lightning or hail. The Risk Management Tool analyzed this information which has been reported below in **Table 6.10** and **Table 6.11**.

TABLE 6.10: BUILDING VULNERABILITY TO THUNDERSTORM WINDS

	Pre-Firm	Resident	ial Buildings at		cial Buildings	Public Bu	ildings at Risk	Total Bu	ildings at Risk
Location	Buildings		Risk		t Risk				
	at Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages
Anson County	13,121	11,812	\$4,724,568	2,520	\$1,320,308	428	\$770,703	14,760	\$6,815,580
Ansonville	315	270	\$95,191	26	\$12,520	20	\$16,705	316	\$124,417
Lilesville	251	211	\$101,212	24	\$3,626	16	\$17,445	251	\$122,282
McFarlan	56	46	\$22,530	8	\$2,799	2	\$837	56	\$26,167
Morven	328	253	\$99,930	55	\$9,271	20	\$21,775	328	\$130,976
Peachland	255	242	\$79,843	25	\$11,457	13	\$13,353	280	\$104,653
Polkton	516	374	\$102,239	63	\$52,353	79	\$58,503	516	\$213,095
Wadesboro	3,243	2,697	\$1,080,753	431	\$597,253	119	\$392,357	3,247	\$2,070,363
Unincorporated Area	8,157	7,719	\$3,142,870	1,888	\$631,029	159	\$249,728	9,766	\$4,023,627
Montgomery County	12,488	16,430	\$7,299,460	1,332	\$1,074,981	342	\$350,034	18,104	\$8,724,475
Biscoe	1,127	957	\$384,518	136	\$132,974	44	\$43,432	1,137	\$560,923
Candor	775	683	\$390,583	79	\$90,384	16	\$9,515	778	\$490,483
Mount Gilead	972	849	\$363,845	111	\$119,131	21	\$10,410	981	\$493,386
Star	1,008	891	\$369,074	98	\$55,434	21	\$6,969	1,010	\$431,478
Troy	2,038	1,715	\$579,364	249	\$168,372	82	\$119,097	2,046	\$866,832
Unincorporated Area	6,568	11,335	\$5,212,076	659	\$508,686	158	\$160,611	12,152	\$5,881,373
Richmond County	26,461	23,708	\$10,986,958	2,659	\$2,870,180	1,009	\$2,183,026	27,376	\$16,040,164
Dobbins Heights	463	437	\$189,129	9	\$1,147	22	\$12,889	468	\$203,165
Ellerbe	608	498	\$244,308	82	\$37,364	36	\$13,564	616	\$295,236
Hamlet	4,481	4,144	\$2,363,711	268	\$318,764	153	\$379,175	4,565	\$3,061,650
Hoffman	291	266	\$79,199	12	\$1,617	14	\$15,668	292	\$96,484
Norman	134	98	\$50,077	22	\$3,184	15	\$7,396	135	\$60,657
Rockingham	8,082	7,168	\$3,062,783	711	\$1,732,530	329	\$1,051,234	8,208	\$5,846,547
Unincorporated Area	12,402	11,097	\$4,997,751	1,555	\$775,574	440	\$703,100	13,092	\$6,476,425
Scotland County	14,317	15,745	\$7,556,159	2,382	\$3,005,370	458	\$1,286,119	18,585	\$11,847,648
East Laurinburg	168	155	\$60,366	10	\$14,793	3	\$4,765	168	\$79,923
Gibson	295	246	\$143,610	35	\$13,951	14	\$7,939	295	\$165,500
Laurinburg	7,400	7,320	\$3,848,683	756	\$1,084,258	230	\$517,565	8,306	\$5,450,506
Wagram	455	393	\$160,016	31	\$9,553	31	\$30,263	455	\$199,833
Unincorporated Area	5,999	7,631	\$3,343,484	1,550	\$1,882,815	180	\$725,587	9,361	\$5,951,886
Pee Dee Lumber Regional Total	66,387	67,695	\$30,567,145	8,893	\$8,270,839	2,237	\$4,589,882	78,825	\$43,427,867

TABLE 6.11: POPULATION VULNERABILITY TO THUNDERSTORM WINDS

111022 011111	OF CENTROW VOEWER	IDILITY TO THUNDERSTO	
Location	Elderly at Risk	Children at Risk	Total at Risk
Anson County	3,864	1,565	26,931
Ansonville	90	36	627
Lilesville	77	31	535
McFarlan	17	7	117
Morven	72	29	505
Peachland	63	25	436
Polkton	408	166	2,846
Wadesboro	972	394	6,774
Unincorporated Area	2,165	877	15,091
Montgomery County	4363	1729	27784
Biscoe	399	158	2,540
Candor	260	103	1,657
Mount Gilead	257	102	1,638
Star	253	100	1,612
Troy	701	278	4,463
Unincorporated Area	2,493	988	15,874
Richmond County	6,691	3,097	46,635
Dobbins Heights	104	48	726
Ellerbe	144	67	1,005
Hamlet	1,365	632	9,512
Hoffman	85	39	591
Norman	15	7	102
Rockingham	2,156	998	15,030
Unincorporated Area	2,822	1,306	19,669
Scotland County	4,885	2,479	35,951
East Laurinburg	41	21	299
Gibson	72	37	533
Laurinburg	2,490	1,264	18,328
Wagram	109	55	800
Unincorporated Area	2,173	1,102	15,991
Pee Dee Lumber Regional Total	19,803	8,870	137,301

SOCIAL VULNERABILITY

It is assumed that all existing populations and future populations are at risk to the tornadoes/thunderstorms hazard.

CRITICAL FACILITIES

All critical facilities should still be considered at-risk to damage should an event occur. A list of all individual critical facilities in the region can be found in **Table 6.25**.

6.5.3. Earthquakes

A probabilistic scenario was created to estimate building and population vulnerabilities in the Pee Dee Lumber region for the earthquake hazard with a 500-year frequency (return period). The Risk Management Tool analyzed this information which has been reported below in **Table 6.12** and **Table 6.13**.

TABLE 6.12: BUILDING VULNERABILITY TO THE EARTHQUAKE HAZARD

	Pre-Firm	Residenti	ial Buildings at	Commerc	ial Buildings at	2 1 11 2			
Location	Buildings		Risk		Risk	Public Bu	ildings at Risk	Total Bui	ldings at Risk
	at Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages
Anson County	13,124	11,818	\$1,943,691	2,529	\$3,149,143	428	\$1,385,033	14,775	\$6,477,867
Ansonville	315	270	\$29,310	26	\$44,712	20	\$43,967	316	\$117,989
Lilesville	251	211	\$26,659	24	\$16,359	16	\$55,272	251	\$98,290
McFarlan	56	46	\$7,052	8	\$5,165	2	\$2,358	56	\$14,574
Morven	328	253	\$39,979	55	\$44,837	20	\$42,624	328	\$127,441
Peachland	255	242	\$31,580	25	\$19,294	13	\$19,770	280	\$70,644
Polkton	516	374	\$45,111	63	\$160,324	79	\$357,595	516	\$563,030
Wadesboro	3,243	2,697	\$426,955	431	\$1,308,924	119	\$544,264	3,247	\$2,280,144
Unincorporated Area	8,160	7,725	\$1,337,045	1,897	\$1,549,528	159	\$319,183	9,781	\$3,205,755
Montgomery County	12488	16430	\$1,828,935	1332	\$2,449,029	342	\$620,141	18,104	\$4,898,104
Biscoe	1,127	957	\$91,352	136	\$421,688	44	\$104,565	1,137	\$617,605
Candor	775	683	\$74,519	79	\$226,872	16	\$25,321	778	\$326,711
Mount Gilead	972	849	\$105,067	111	\$301,463	21	\$33,537	981	\$440,067
Star	1,008	891	\$81,109	98	\$184,575	21	\$23,636	1,010	\$289,320
Troy	2,038	1,715	\$172,090	249	\$508,101	82	\$244,819	2,046	\$925,010
Unincorporated Area	6,568	11,335	\$1,304,798	659	\$806,330	158	\$188,263	12,152	\$2,299,391
Richmond County	26,461	23,708	3,912,273	2,659	5,667,033	1,009	2,315,706	27,376	11,895,011
Dobbins Heights	463	437	\$68,660	9	\$4,861	22	\$26,829	468	\$100,350
Ellerbe	608	498	\$60,188	82	\$90,011	36	\$49,242	616	\$199,440
Hamlet	4,481	4,144	\$780,919	268	\$1,000,294	153	\$508,974	4,565	\$2,290,188
Hoffman	291	266	\$26,699	12	\$7,441	14	\$18,326	292	\$52,465
Norman	134	98	\$10,390	22	\$8,263	15	\$8,894	135	\$27,546
Rockingham	8,082	7,168	\$1,280,921	711	\$3,155,417	329	\$977,844	8,208	\$5,414,183
Unincorporated Area	12,402	11,097	\$1,684,496	1,555	\$1,400,746	440	\$725,597	13,092	\$3,810,839
Scotland County	14,333	15,756	2,955,404	2,387	6,163,866	458	1,622,190	18,601	10,741,459
East Laurinburg	168	155	\$26,655	10	\$22,013	3	\$8,999	168	\$57,667
Gibson	295	246	\$69,420	35	\$47,173	14	\$21,895	295	\$138,487
Laurinburg	7,400	7,320	\$1,638,376	756	\$2,536,318	230	\$840,789	8,306	\$5,015,483
Wagram	455	393	\$55,873	31	\$26,303	31	\$60,837	455	\$143,014
Unincorporated Area	6,015	7,642	\$1,165,080	1,555	\$3,532,059	180	\$689,670	9,377	\$5,386,808

Location	Pre-Firm Buildings	Resident	ial Buildings at Risk	Commercial Buildings at Risk		Public Buildings at Risk		Total Buildings at Risk	
	at Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages
Pee Dee Lumber Regional Total	66,406	67,712	\$10,640,303	8,907	\$17,429,071	2,237	\$5,943,070	78,856	\$34,012,441

TABLE 6.13: POPULATION VULNERABILITY TO THE EARTHQUAKE HAZARD

Location	Elderly at Risk	Children at Risk	Total at Risk			
Anson County	3,866	1,566	26,943			
Ansonville	90	36	627			
Lilesville	77	31	535			
McFarlan	17	7	117			
Morven	72	29	505			
Peachland	63	25	436			
Polkton	408	166	2,846			
Wadesboro	972	394	6,774			
Unincorporated Area	2,167	878	15,103			
Montgomery County	4363	1729	27784			
Biscoe	399	158	2,540			
Candor	260	103	1,657			
Mount Gilead	257	102	1,638			
Star	253	100	1,612			
Troy	701	278	4,463			
Unincorporated Area	2,493	988	15,874			
Richmond County	6,691	3,097	46,635			
Dobbins Heights	104	48	726			
Ellerbe	144	67	1,005			
Hamlet	1,365	632	9,512			
Hoffman	85	39	591			
Norman	15	7	102			
Rockingham	2,156	998	15,030			
Unincorporated Area	2,822	1,306	19,669			
Scotland County	4,888	2,481	35,974			
East Laurinburg	41	21	299			
Gibson	72	37	533			
Laurinburg	2,490	1,264	18,328			
Wagram	109	55	800			
Unincorporated Area	2,176	1,104	16,014			
Pee Dee Lumber Regional Total	19,808	8,873	137,336			

Source: NCEM Risk Management Tool

SOCIAL VULNERABILITY

It is assumed that all existing populations and future populations are at risk to the earthquake hazard.

CRITICAL FACILITIES

All critical facilities should still be considered at-risk to minor damage should an event occur. A list of all individual critical facilities in the region can be found in **Table 6.25**.

In conclusion, an earthquake could potentially impact all existing and future buildings, facilities, and populations in the Pee Dee Lumber region. Though minor earthquakes are often recorded but not felt, they may rattle breakables and cause minimal damage. Furthermore, major earthquakes have potential to damage structures. Severe impacts of earthquakes may result in debris clean-up, service disruption, building collapse, and fatalities. Specific vulnerabilities for assets will be greatly dependent on their individual design and the mitigation measures in place, where appropriate. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates if data becomes available. Furthermore, mitigation actions to address earthquake vulnerability will be considered.

6.5.4. Geological (Landslide)

GIS analysis was used to complete the vulnerability assessment for landslides in the Pee Dee Lumber Region. The potential dollar value of exposed land and property total can be determined using the USGS Landslide Susceptibility Index (detailed in Section 5: *Hazard Profiles*), county level tax parcel data, and GIS analysis. **Table 6.14** presents the potential at-risk property where available. All areas of the Pee Dee Lumber Region are identified as moderate or high incidence areas by the USGS landslide data. The incidence levels (high and moderate) were used to identify different areas of concern for the analysis below.

TABLE 6.14: TOTAL POTENTIAL AT-RISK PARCELS FOR THE GEOLOGICAL (LANDSLIDE) HAZARD

Location	Number of Ris		Number of Improvements at Risk Total Value of Improvem (\$)		Sat Improvements at Total Value of Improvemen		
Incidence Level	Moderate	High	Moderate	High	Moderate	High	
Anson County	2,588	240	1,154	63	\$80,148,500	\$4,759,600	
Ansonville	28	-	13	-	\$773,500	\$0	
Lilesville	-	-	-	-	\$0	\$0	
McFarlan	-	-	-	-	\$0	\$0	
Morven	-	-	-	-	\$0	\$0	
Peachland	-	-	-	-	\$0	\$0	
Polkton	602	-	293	-	\$13,905,000	\$0	
Wadesboro	88	-	59	-	\$3,198,900	\$0	
Unincorporated Area	1,870	240	789	63	\$62,271,100	\$4,759,600	
Montgomery County	571	29	196	3	\$16,016,399	\$914,775	
Biscoe	-	-	-	-	\$0	\$0	
Candor	-	-	-	-	\$0	\$0	
Mount Gilead	-	-	-	-	\$0	\$0	

Location	Number of Ris		Number of Improvements at Risk (\$)			
Incidence Level	Moderate	High	Moderate	High	Moderate	High
Star	-	-	-	-	\$0	\$0
Troy	-	-	-	-	\$0	\$0
Unincorporated Area	571	29	196	3	\$16,016,399	\$914,775
Richmond County	355	198	106	69	\$7,461,078	\$4,921,392
Dobbins Heights	-	-	-	-	\$0	\$0
Ellerbe	-	-	-	-	\$0	\$0
Hamlet	-	-	-	-	\$0	\$0
Hoffman	-	-	-	-	\$0	\$0
Norman	-	-	-	-	\$0	\$0
Rockingham	-	-	-	-	\$0	\$0
Unincorporated Area	355	198	106	69	\$7,461,078	\$4,921,392
Scotland County	-	-	-	-	\$0	\$0
East Laurinburg	-	-	-	-	\$0	\$0
Gibson	-	-	-	-	\$0	\$0
Laurinburg	-	-	-	-	\$0	\$0
Wagram	-	-	-	-	\$0	\$0
Unincorporated Area	-	-	-	-	\$0	\$0
Pee Dee Lumber Regional Total	3,514	467	1,456	135	\$103,625,977	\$10,595,767

Source: United States Geological Survey, Local governments

SOCIAL VULNERABILITY

Given moderate to high susceptibility across the entire Pee Dee Lumber Region, it is assumed that a moderate amount of population is at risk.

CRITICAL FACILITIES

A list of specific critical facilities and their associated risk can be found in **Table 6.25** at the end of this section.

In conclusion, a landslide has the potential to impact many existing and future buildings, facilities, and populations in the Pee Dee Lumber Region, though some areas are at a higher risk than others due to a variety of factors. For example, steep slopes and modified slopes bear a greater risk than flat areas. Specific vulnerabilities for Pee Dee Lumber assets will be greatly dependent on their individual design and the mitigation measures in place, where appropriate. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates if data becomes available.

6.5.5 Flooding

Historical evidence indicates that the Pee Dee Lumber Region is susceptible to flood events. A total of 87 flood events have been reported by the National Centers for Environmental Information since 1993, resulting in over \$1.69 million (2019 dollars) in damages.

In order to assess flood risk, a GIS-based analysis was used to estimate exposure to flood events using Digital Flood Insurance Rate Map (DFIRM) data in combination with local tax assessor records for each of the Pee Dee Lumber counties. The determination of assessed value at-risk (exposure) was calculated using GIS analysis by summing the total assessed building values for only those improved properties that were confirmed to be located within an identified floodplain. **Table 6.15** presents the potential at-risk property. Both the number of parcels and the approximate value are presented.

TABLE 6.15: ESTIMATED EXPOSURE OF PARCELS TO THE FLOODING HAZARD

TA	01101201	MARITED EAR O	DOTE OF THREELD T	O THE PEOODING		
	1% Annu	ial Chance of Flo	oding (100-year)	0.2% Annual C	Chance of Flood	ling (500-year)
Location	Approx. Number of Parcels	Approx. Number of Improved Buildings	Approx. Improved Value of Buildings	Approx. Number of Parcels	Approx. Number of Improved Buildings	Approx. Improved Value of Buildings
Anson County	1,844	500	\$45,449,500	1,877	509	\$45,639,700
Ansonville	26	6	\$221,800	26	6	\$221,800
Lilesville	-	-	\$0			
McFarlan	-	-	\$0			
Morven	19	9	\$149,000	19	9	\$149,000
Peachland	16	4	\$172,100	17	5	\$211,400
Polkton	80	20	\$1,182,800	83	20	\$1,182,800
Wadesboro	113	20	\$940,000	114	20	\$913,300
Unincorporated Area	1,590	441	\$42,783,800	1,618	449	\$42,961,400
Montgomery County	2,480	1,133	\$289,769,596	2,551	1,176	\$296,379,551
Biscoe	36	23	\$9,128,994	36	23	\$9,128,994
Candor	-	-	\$0	-	-	\$0
Mount Gilead	1	1	\$7,865	1	1	\$7,865
Star	-	-	\$0	-	-	\$0
Troy	-	-	\$0	1	1	\$100,639
Unincorporated Area	2,443	1,109	\$280,632,737	2,513	1,151	\$287,142,053
Richmond County	2,224	810	\$151,228,864	2,332	851	\$159,106,469
Dobbins Heights	-	-	\$0	-	-	\$0
Ellerbe	-	-	\$0	-	-	\$0
Hamlet	116	41	\$7,014,329	145	53	\$8,261,372
Hoffman	9	3	\$119,092	9	3	\$119,092
Norman	-	-	\$0	-	-	\$0
Rockingham	299	161	\$30,760,628	344	183	\$33,993,459
Unincorporated Area	1,800	605	\$113,334,815	1,834	612	\$116,732,546
Scotland County	1,646	722	\$197,379,060	1,730	763	\$200,208,180
East Laurinburg	37	28	\$2,198,150	43	31	\$2,293,830
Gibson	-	-	\$0	-	-	\$0
Laurinburg	318	146	\$106,486,250	328	149	\$106,531,270
Wagram	-	-	\$0	-	-	\$0
Unincorporated Area	1,291	548	\$88,694,660	1,359	583	\$91,383,080
Pee Dee Lumber Regional Total	8,194	3,165	\$683,827,020	8,490	3,299	\$701,333,900

Source: FEMA DFIRM

To assess flood risk, the NCEM Risk Management Tool (RMT) analyzed buildings located in the 1 percent chance of annual floodplains. The buildings are assessed by the type of building (commercial, residential, or public) and also assesses Pre-Firm buildings, or structures built before flood code regulations were installed. This data is shown by jurisdiction in **Table 6.16**.

TABLE 6.16: BUILDING VULNERABILITY FOR THE 100-YEAR FLOODPLAINS

	Pre-Firm		al Buildings at Risk		cial Buildings at Risk	Public Build	lings at Risk	Total Buildings at Risk	
Location	Buildings at Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages
Anson County	22	19	\$32,087	5	\$11,543,961	0	0	24	\$11,576,048
Ansonville	0	0	\$0	0	\$0	0	\$0	0	\$0
Lilesville	0	0	\$0	0	\$0	0	\$0	0	\$0
McFarlan	0	0	\$0	0	\$0	0	\$0	0	\$0
Morven	4	3	\$4,366	1	\$9,526	0	\$0	4	\$13,892
Peachland	0	0	\$0	0	\$0	0	\$0	0	\$0
Polkton	13	11	\$17,613	2	\$38,514	0	\$0	13	\$56,127
Wadesboro	3	1	\$778	2	\$11,495,921	0	\$0	3	\$11,496,699
Unincorporated Area	2	4	\$9,330	0	\$0	0	\$0	4	\$9,330
Montgomery County	11	15	\$100,432	3	\$77,391	0	\$0	18	\$177,823
Biscoe	2	2	\$1,927	0	\$0	0	\$0	2	\$1,927
Candor									
Mount Gilead	2	2	\$1,489	0	\$0	0	\$0	2	\$1,489
Star	1	1	\$1,121	0	\$0	0	\$0	1	\$1,121
Troy	0	0	\$0	0	\$0	0	\$0	0	\$0
Unincorporated Area	6	10	\$95,895	3	\$77,391	0	\$0	13	\$173,286
Richmond County	162	75	\$451,487	71	\$1,576,468	14	\$559,269	160	\$2,587,224
Dobbins Heights	0	0	\$0	0	\$0	0	\$0	0	\$0
Ellerbe	0	0	\$0	0	\$0	0	\$0	0	\$0
Hamlet	17	7	\$88,726	6	\$209,878	4	\$98,427	17	\$397,030
Hoffman	0	0	\$0	0	\$0	0	\$0	0	\$0
Norman	0	0	\$0	0	\$0	0	\$0	0	\$0
Rockingham	107	51	\$304,606	44	\$1,325,210	10	\$460,842	105	\$2,090,659
Unincorporated Area	38	17	\$58,155	21	\$41,380	0	\$0	38	\$99,535
Scotland County	127	123	\$1,099,073	12	\$371,136	1	\$33,256	136	\$1,503,466
East Laurinburg	22	22	\$140,915	0	\$0	0	\$0	22	\$140,915
Gibson	0	0	\$0	0	\$0	0	\$0	0	\$0
Laurinburg	72	67	\$827,441	7	\$223,236	0	\$0	74	\$1,050,678
Wagram	0	0	\$0	0	\$0	0	\$0	0	\$0
Unincorporated Area	33	34	\$130,717	5	\$147,900	1	\$33,256	40	\$311,873
Pee Dee Lumber Regional Total	322	232	\$1,683,079	91	\$13,568,956	15	\$592,525	338	\$15,844,561

Source: NCEM Risk Management Tool

Figure 6.4 below displays visual hotspots of potential dollar losses for the flood hazard in Anson County. Based on the photo, most hot spots are in an area with low vulnerability.

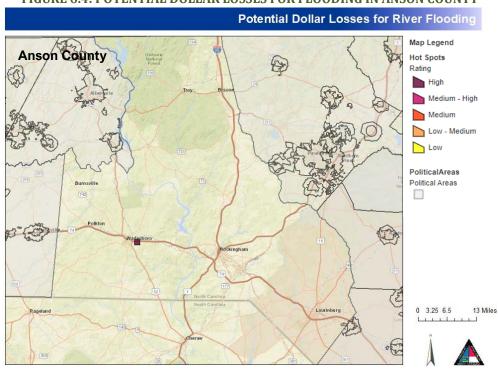


FIGURE 6.4: POTENTIAL DOLLAR LOSSES FOR FLOODING IN ANSON COUNTY

The same information for Montgomery County is presented below in Figure 6.6.

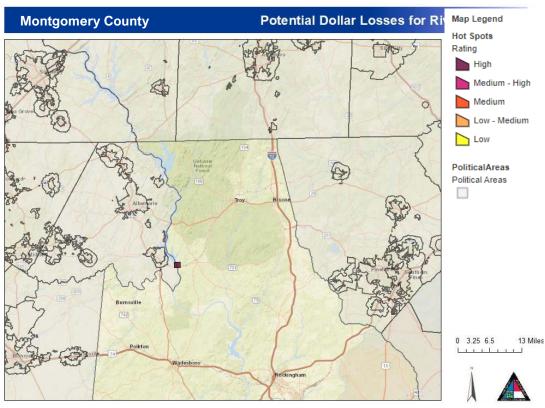


FIGURE 6.6: POTENTIAL DOLLAR LOSSES FOR FLOODING IN MONTGOMERY COUNTY

The same information for Richmond County is presented below in Figure 6.6.

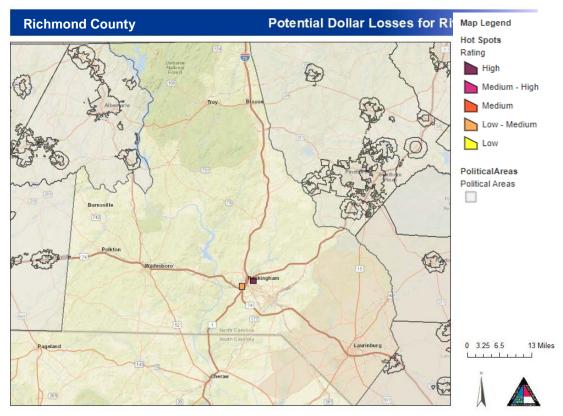


FIGURE 6.6: POTENTIAL DOLLAR LOSSES FOR FLOODING IN RICHMOND COUNTY

The same information for Scotland County is presented below in Figure 6.6.

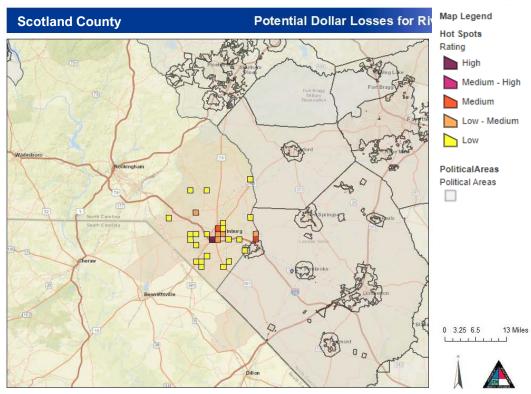


FIGURE 6.6: POTENTIAL DOLLAR LOSSES FOR FLOODING IN SCOTLAND COUNTY

Table 6.17 assesses the vulnerability of the region's population. This data is also from the RMT and analyzes the populations of elderly and children living at risk to the 1 percent annual flooding.

TABLE 6.17: POPULATION VULNERABILITY FOR 100-YEAR FLOODPLAINS

Incidence Level	Elderly at Risk	Children at Risk	Total at Risk
Anson County	14	5	101
Ansonville	0	0	0
Lilesville	0	0	0
McFarlan	0	0	0
Morven	1	0	6
Peachland	0	0	0
Polkton	12	5	84
Wadesboro	0	0	3
Unincorporated Area	1	0	8
Montgomery County	4	1	25
Biscoe	1	0	5
Candor	0	0	0
Mount Gilead	1	0	4
Star	0	0	2

Incidence Level	Elderly at Risk	Children at Risk	Total at Risk
Troy	0	0	0
Unincorporated Area	2	1	14
Richmond County	21	10	153
Dobbins Heights	0	0	0
Ellerbe	0	0	0
Hamlet	2	1	16
Hoffman	0	0	0
Norman	0	0	0
Rockingham	15	7	107
Unincorporated Area	4	2	30
Scotland County	33	17	238
East Laurinburg	0	0	0
Gibson	0	0	0
Laurinburg	23	12	167
Wagram	0	0	0
Unincorporated Area	10	5	71
Pee Dee Lumber Regional Total	72	33	517

SOCIAL VULNERABILITY

A national Census has not been conducted since 2010; therefore, 2010 Census tract level population counts are outdated for this update. However, population estimates from the US Census Bureau as of July 1, 2017 were available at a jurisdictional level. This data was analyzed to present at-risk populations to the flooding hazard in the Pee Dee Lumber region and can be seen below in **Figure 6.11**.

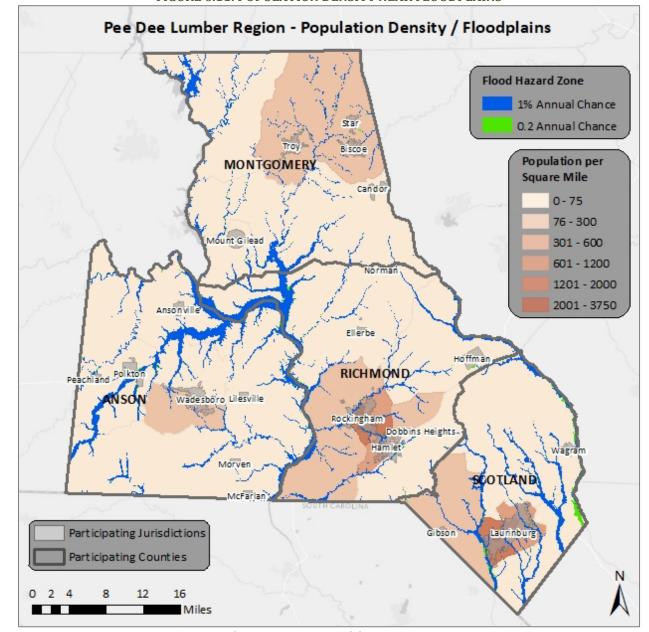


FIGURE 6.11: POPULATION DENSITY NEAR FLOODPLAINS

Source: FEMA DFIRM, US Census Bureau

CRITICAL FACILITIES

The critical facility analysis revealed that there are 19 critical facilities located in the Pee Dee Lumber Region's 1.0-percent and 2.0-percent annual chance floodplain based on FEMA DFIRM boundaries and GIS analysis. (As previously noted, this analysis does not consider building elevation, which may negate risk.) These facilities include 1 Public School, 10 Medical Facilities, and 8 Fire/EMS Stations. A list of specific critical facilities and their associated risk can be found in **Table 6.25** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings, facilities, and populations in the Pee Dee Lumber Region, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries.

It is certainly possible that more severe events could occur beyond these boundaries or urban (flash) flooding could impact additional structures. Such site-specific vulnerability determinations should be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

6.5.6 Wildfires

Although historical evidence indicates that the Pee Dee Lumber Region is susceptible to wildfire events, there are few reports of damage. Therefore, it is difficult to calculate a reliable annualized loss figure. Annualized loss is considered negligible though it should be noted that a single event could result in significant damages throughout the region.

To estimate exposure to wildfire, the Wildland Urban Interface (WUI) Risk Index for the region was obtained through the Southern Wildfire Risk Assessment. The WUI uses a Response Function modeling approach and rates the potential impact of a wildfire on people and their homes. The index ranges from -1 to -9, with -9 being the most negative impact. For example, an area with high housing density and high flame lengths are rated -9, while an area with low housing density and low flame lengths are rated -1. Atrisk areas fall within the range of -7 to -9. This index was layered with parcel data using GIS analysis. Figure 6.12 shows the WUI Risk Index for the region below.

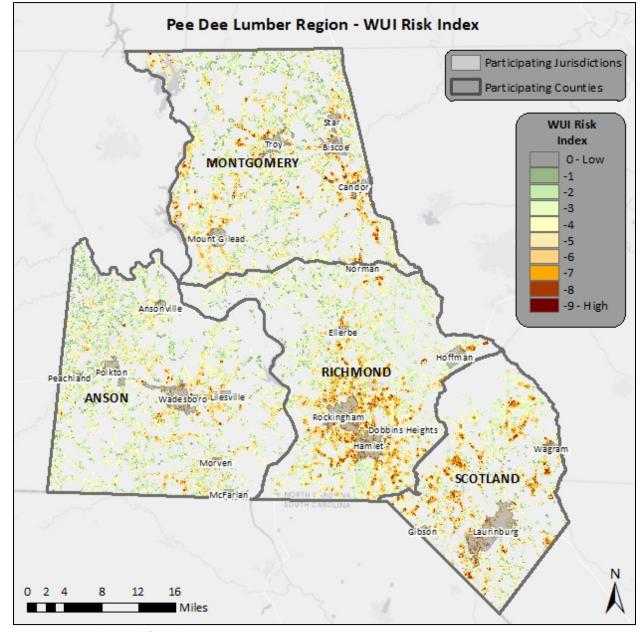


FIGURE 6.12: WILDLAND URBAN INTERFACE RISK INDEX

Source: Southern Wildfire Risk Assessment

The entire region contains some lands where the value falls into the at-risk category. Overall, there is a high-to-medium wildfire ignition density risk index in the region which is somewhat than other areas in North Carolina.

SOCIAL VULNERABILITY

Even though not all areas have equal vulnerability, there is some susceptibility across the entire Pee Dee Lumber Region. It is assumed that the total population is at risk to the wildfire hazard.

Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

CRITICAL FACILITIES

None of the Pee Dee Lumber Region critical facilities are in the at-risk area (-7 or higher) for wildfires. **Table 6.19** shows the results of the GIS analysis.

TABLE 6.19: CRITICAL FACILITIES IN THE AT-RISK WUI RISK INDEX AREA

Location	Number of At-Risk Critical Facilities			
Anson County	0			
Montgomery County	0			
Richmond County	0			
Scotland County	0			
Pee Dee Lumber Regional Total	0			

Source: Southern Wildfire Risk Assessment, Local governments

Additional information was provided through the NCEM Risk Management Tool (RMT). This data can be seen in below in **Table 6.20** and **Table 6.21**.

TABLE 6.20: BUILDING VULNERABILITY TO WILDFIRE HAZARDS

Location	Pre-Firm Buildings at Risk	Residential Buildings at Risk		Commercial Buildings at Risk		Public Buildings at Risk		Total Buildings at Risk	
		Number	Damages	Number	Damages	Number	Damages	Number	Damages
Anson County	11,645	10,611	\$1,250,741,542	2,180	879,054,318	367	499,747,574	13,158	\$2,629,543,435
Ansonville	199	171	\$18,665,335	16	\$10,087,782	13	\$12,947,516	200	\$41,700,634
Lilesville	244	204	\$20,505,320	24	\$5,251,035	16	\$21,150,504	244	\$46,906,859
McFarlan	56	46	\$4,867,418	8	\$1,672,695	2	\$852,942	56	\$7,393,056
Morven	230	185	\$20,542,842	35	\$10,262,687	10	\$8,479,663	230	\$39,285,192
Peachland	233	225	\$20,575,340	19	\$5,095,280	12	\$8,469,573	256	\$34,140,193
Polkton	446	315	\$29,767,896	56	\$41,769,887	75	\$97,276,009	446	\$168,813,791
Wadesboro	2,710	2,329	\$273,741,633	284	\$353,457,717	101	\$215,598,904	2,714	\$842,798,254
Unincorporated Area	7,527	7,136	\$862,075,758	1,738	\$451,457,235	138	\$134,972,463	9,012	\$1,448,505,456
Montgomery County	1738	1927	\$244,212,230	148	117346229	44	43146666	2119	\$224,587,327
Biscoe	61	53	\$7,238,849	8	\$4,553,012	1	\$9,347,389	62	\$21,139,249
Candor	504	465	\$58,754,152	31	\$54,186,421	11	\$7,910,606	507	\$120,851,179
Mount Gilead	0	0	\$0	0	\$0	0	\$0	0	\$0
Star	168	153	\$16,382,621	10	\$4,439,619	5	\$1,137,023	168	\$21,959,264
Troy	190	167	\$24,041,524	14	\$24,527,964	9	\$12,068,146	190	\$60,637,635
Unincorporated Area	815	1,089	\$137,795,084	85	\$29,639,213	18	\$12,683,502	1,192	\$180,117,80
Richmond County	18,905	17,446	\$2,199,731,274	1,611	1,276,387,167	632	639,664,859	19,689	4,115,783,301
Dobbins Heights	219	213	\$23,256,808	3	\$428,135	7	\$3,096,637	223	\$26,781,579
Ellerbe	380	328	\$33,413,729	27	\$15,029,143	28	\$15,903,061	383	\$64,345,933
Hamlet	3,345	3,157	\$411,696,964	144	\$198,427,899	100	\$137,790,712	3,401	\$747,915,575
Hoffman	214	198	\$18,481,913	9	\$2,229,187	9	\$7,789,331	216	\$28,500,432
Norman	96	70	\$6,835,097	14	\$2,334,953	13	\$4,864,810	97	\$14,034,860
Rockingham	5,023	4,571	\$640,223,478	355	\$664,349,295	179	\$237,951,165	5,105	\$1,542,523,939
Unincorporated Area	9,628	8,909	\$1,065,823,285	1,059	\$393,588,555	296	\$232,269,143	10,264	\$1,691,680,983
Scotland County	10,533	12,261	1,608,604,293	1,784	1,467,822,376	332	524,628,330	14,377	3,601,055,000

Location	Pre-Firm Buildings	Residentia	al Buildings at Risk	Comme	rcial Buildings at Risk	Public B	uildings at Risk	Total Buildings at Risk			
Location	at Risk	Number	Damages	Number	Damages	Number	Damages	Number	Damages		
East Laurinburg	43	34	\$3,081,878	7	\$4,069,596	2	\$2,636,737	43	\$9,788,210		
Gibson	110	98	\$15,140,787	4	\$1,023,443	8	\$3,494,001	110	\$19,658,231		
Laurinburg	4,838	4,966	\$810,201,003	436	\$521,982,359	137	\$211,446,926	5,539	\$1,543,630,289		
Wagram	400	350	\$46,969,780	24	\$8,189,172	26	\$24,893,829	400	\$80,052,782		
Unincorporated Area	5,142	6,813	\$733,210,845	1,313	\$932,557,806	159	\$282,156,837	8,285	\$1,947,925,488		
Pee Dee Lumber Regional Total	42,821	42,245	\$5,303,289,339	5,723	\$3,740,610,090	1,375	\$1,707,187,4 29	49,343	\$10,570,969,06 3		

Source: NCEM Risk Management Tool

TABLE 6.21: POPULATION VULNERABILITY TO WILDFIRE HAZARD

17ADEE 0:21:1 OI	ULATION VULNER	ADIEITI TO WIEDTH	
Incidence Level	Elderly at Risk	Children at Risk	Total at Risk
Anson County	3,446	1,395	24,005
Ansonville	57	23	397
Lilesville	74	30	517
McFarlan	17	7	117
Morven	53	21	369
Peachland	59	23	405
Polkton	344	140	2,397
Wadesboro	840	340	5,851
Unincorporated Area	2,002	811	13,952
Montgomery County	550	218	3506
Biscoe	22	9	140
Candor	177	70	1,126
Mount Gilead	0	0	0
Star	44	17	281
Troy	68	27	434
Unincorporated Area	239	95	1,525
Richmond County	4,900	2,268	34,153
Dobbins Heights	51	23	354
Ellerbe	95	44	663
Hamlet	1,040	482	7,249
Hoffman	63	29	440
Norman	11	5	73
Rockingham	1,374	636	9,581
Unincorporated Area	2,266	1,049	15,793
Scotland County	3,763	1,910	27,692
East Laurinburg	9	5	66
Gibson	29	15	212
Laurinburg	1,688	857	12,424
Wagram	97	49	712
Unincorporated Area	1,940	984	14,278

Incidence Level	Elderly at Risk	Children at Risk	Total at Risk
Pee Dee Lumber Regional Total	12,659	5,791	89,356

Source: NCEM Risk Management Tool

6.5.7 Hazardous Substances

Although historical evidence and existing Toxic Release Inventory sites indicate that the Pee Dee Lumber Region is susceptible to hazardous substance events, there are few reports of damage. Therefore, a calculated annualized loss figure may not be completely reliable.

Most hazardous substance incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous substance incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS intersection analysis was used for fixed and mobile areas and parcels⁴. In both scenarios, two sizes of buffers—0.5 mile and 1 mile—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in the Pee Dee Lumber Region, along with buffers, were used for analysis as shown in **Figure 6.13**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure 6.14** shows the areas used for mobile toxic release buffer analysis. The results indicate the approximate number of parcels, improved value, as shown in **Table 6.22** (fixed sites), **Table 6.23** (mobile road sites) and **Table 6.24** (mobile railroad sites)⁵.

⁴ This type of analysis will likely yield inflated results (generally higher than what is actually reported after an actual event).

⁵ Note that parcels included in the 1-mile analysis are also included in the 0.5-mile analysis.

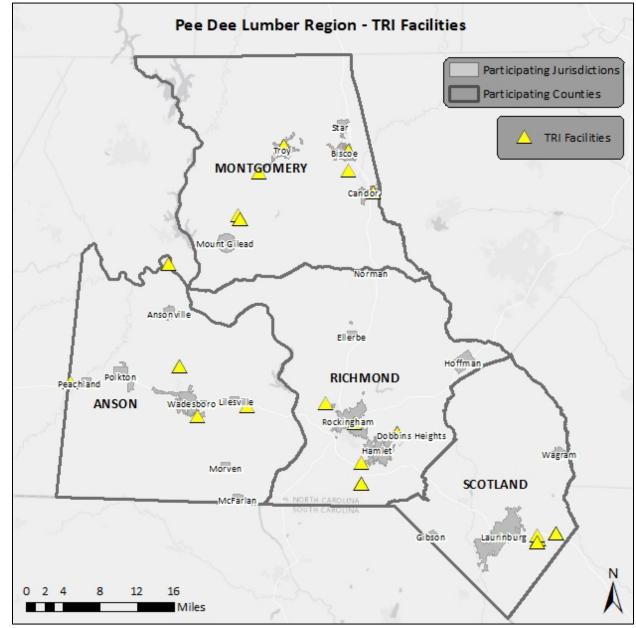


FIGURE 6.13: TOXIC RELEASE INVENTORY (TRI) FACILITIES

Source: EPA

TABLE 6.22: EXPOSURE OF IMPROVED PROPERTY TO HAZARDOUS SUBSTANCES (FIXED SITES)

Number of Number Im Parcels Improved		0.5 Mile Bu	ffer	1.0 Mile Buffer										
	Approx. Improved Value	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value										
Anson County	311	159	\$9,868,000	959	507	\$36,739,200								
Ansonville	-	-	\$0	-	-	\$0								
Lilesville	-	-	\$0	3	-	\$0								

		0.5 Mile Bu	ffer		1.0 Mile Bu	ffer				
Location	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value				
McFarlan	-	-	\$0	-	-	\$0				
Morven	-	-	\$0	-	-	\$0				
Peachland	-	-	\$0	3	-	\$0				
Polkton	-	-	\$0	-	-	\$0				
Wadesboro	111	65	\$4,285,000	376	240	\$17,288,500				
Unincorporated Area	200	94	\$5,583,000	577	267	\$19,450,700				
Montgomery County	997	646	\$147,373,468	3,280	2,000	\$360,437,704				
Biscoe	192	148	\$25,807,129	572	397	\$54,487,324				
Candor	5	3	\$2,333,649	46	23	\$8,125,580				
Mount Gilead	-	-	\$0	-	-	\$0				
Star	-	-	\$0	-	-	\$0				
Troy	544	374	\$52,692,796	1,244 822		\$123,189,407				
Unincorporated Area	256	121	\$66,539,894	1,418	758	\$174,635,393				
Richmond County	1,018	606	\$179,021,002	3,581	2,283	\$367,828,256				
Dobbins Heights	-	-	\$0	56	24	\$889,610				
Ellerbe	-	-	\$0	-	-	\$0				
Hamlet	10	7	\$2,895,411	76	50	\$7,129,676				
Hoffman	-	-	\$0	-	-	\$0				
Norman	-	-	\$0	-	-	\$0				
Rockingham	593	371	\$129,672,510	1,987	1,500	\$266,139,957				
Unincorporated Area	415	228	\$46,453,081	1,462	709	\$93,669,013				
Scotland County	108	75	\$54,280,860	,280,860 257		\$71,768,590				
East Laurinburg	-	-	\$0	-	-	\$0				
Gibson	-	-	\$0	-	-	\$0				
Laurinburg	-	-	\$0	-	-	\$0				
Wagram	-	-	\$0	-	-	\$0				
Unincorporated Area	108	75	\$54,280,860	257	164	\$71,768,590				
Pee Dee Lumber Regional Total	2,434	1,486	\$390,543,330	8,077	4,954	\$836,773,750				

Source: EPA, Local governments

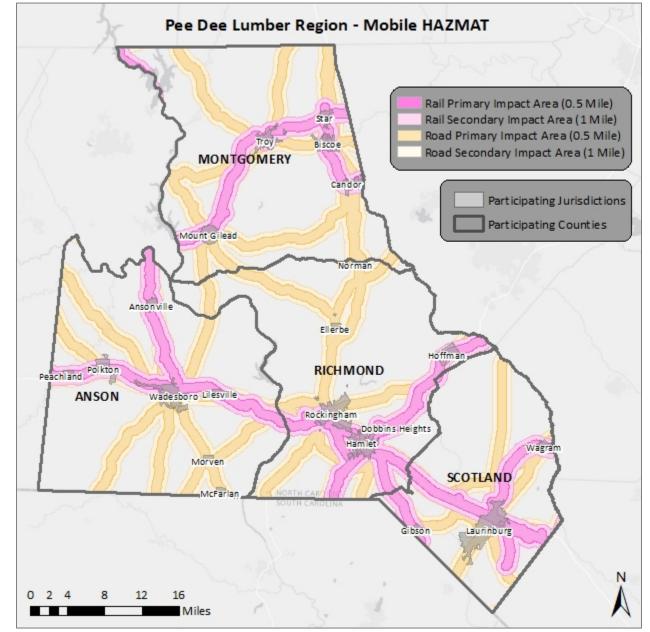


FIGURE 6.14: MOBILE HAZMAT IMPACT ZONES

Source: NC Department of Transportation

TABLE 6.23: EXPOSURE OF IMPROVED PROPERTY TO HAZARDOUS SUBSTANCES (MOBILE ANALYSIS – ROAD)

		0.5 Mile Bu	ıffer	1.0 Mile Buffer							
Location	of Parcels Improved	Approx. Improved Value	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value						
Anson County	11,014	5,801	\$342,548,200	14,129	7,464	\$463,032,000					
Ansonville	433	226	\$10,493,700	539	278	\$12,678,600					
Lilesville	277	160	\$8,175,500	359	202	\$9,866,900					

		0.5 Mile Bu	uffer		1.0 Mile Bu	uffer		
Location	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value		
McFarlan	95	40	\$1,417,200	104	43	\$1,458,500		
Morven	435	225	\$8,248,800	435	225	\$8,248,800		
Peachland	300	167	\$9,130,400	355	199	\$10,381,500		
Polkton	532	255	\$10,324,300	574	282	\$12,768,600		
Wadesboro	3,397	1,857	\$114,378,000	3,511	1,937	\$122,947,100		
Unincorporated Area	5,545	2,871	\$180,380,300	8,252	4,298	\$284,682,000		
Montgomery County	12,197	6,894	\$941,052,800	15,378	8,319	\$1,112,739,170		
Biscoe	858	613	\$78,392,741	862	614	\$78,524,874		
Candor	523	334	\$34,643,840	523	334	\$34,643,840		
Mount Gilead	1,031	548	\$59,507,004	1,031	548	\$59,507,004		
Star	535	372	\$38,152,415	535	372	\$38,152,415		
Troy	1,507	998	\$143,490,891	1,513 1,003		\$144,070,146		
Unincorporated Area	7,743	4,029	\$586,865,909	10,914	5,448	\$757,840,891		
Richmond County	18,775	10,433	\$1,175,263,828	25,964	14,392	\$1,513,483,111		
Dobbins Heights	873	337	\$12,356,172	881	339	\$12,441,215		
Ellerbe	668	367	\$29,260,867	67 680 377		\$30,066,412		
Hamlet	2,896	1,918	\$187,275,212	3,415	2,288	\$217,185,660		
Hoffman	334	142	\$9,682,048	346	149	\$10,064,932		
Norman	129	74	\$4,085,821	129	74	\$4,085,821		
Rockingham	4,051	2,944	\$456,152,927	4,700	3,470	\$514,661,617		
Unincorporated Area	9,824	4,651	\$476,450,781	15,813	7,695	\$724,977,454		
Scotland County	12,444	8,472	\$1,032,100,540	16,394	11,042	\$1,281,835,850		
East Laurinburg	178	144	\$5,606,280	178	144	\$5,606,280		
Gibson	296	197	\$13,217,340	296	197	\$13,217,340		
Laurinburg	6,067	4,462	\$597,931,290	7,121	5,222	\$669,483,790		
Wagram	430	259	\$26,557,430	581	369	\$31,462,290		
Unincorporated Area	5,473	3,410	\$388,788,200	8,218	5,110	\$562,066,150		
Pee Dee Lumber Regional Total	54,430	31,600	\$3,490,965,368	71,865	41,217	\$4,371,090,131		

Source: NC Department of Transportation, Local Governments

TABLE 6.24: EXPOSURE OF IMPROVED PROPERTY TO HAZARDOUS SUBSTANCES (MOBILE ANALYSIS – RAILROAD)

		0.5 Mile Buf	fer		1.0 Mile Bu	ffer
Location	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value	Approx. Number of Parcels	Approx. Number Improved	Approx. Improved Value
Anson County	4,596	2,172	\$100,698,900	7,152	3,512	\$188,712,000
Ansonville	473	250	\$11,470,600	539	278	\$12,678,600
Lilesville	342	191	\$9,009,000	359	202	\$9,866,900
McFarlan	-	-	\$0	-	-	\$0
Morven	-	-	\$0	-	-	\$0

		0.5 Mile Buf	fer		1.0 Mile Bu	ffer
Location	Approx.	Approx.	Approx.	Approx.	Approx.	Approx.
Location	Number	Number	Improved	Number	Number	Improved
	of Parcels	Improved	Value	of Parcels	Improved	Value
Peachland	353	198	\$10,343,400	355	199	\$10,381,500
Polkton	487	235	\$9,092,100	577	282	\$12,105,600
Wadesboro	1,085	474	\$18,637,500	2,157	999	\$53,586,100
Unincorporated Area	1,856	824	\$42,146,300	3,165	1,552	\$90,093,300
Montgomery County	6,409	3,911	\$605,393,363	10,146	6,149	\$854,531,149
Biscoe	820	584	\$57,787,704	852	608	\$72,582,285
Candor	393	259	\$29,737,801	503	327	\$34,283,429
Mount Gilead	610	349	\$35,704,184	952	527	\$56,952,684
Star	535	372	\$38,152,415 535		372	\$38,152,415
Troy	1,169	762	\$104,204,985 1,497		989	\$137,871,225
Unincorporated Area	2,882	1,585	\$339,806,274	5,807	3,326	\$514,689,111
Richmond County	11,285	6,398	\$656,571,993	16,047	9,010	\$993,156,219
Dobbins Heights	858	332	\$12,217,336	881	339	\$12,441,215
Ellerbe	-	-	\$0	-	-	\$0
Hamlet	2,757	1,864	\$176,280,138	3,417	2,292	\$217,273,307
Hoffman	334	142	\$9,682,048	346	149	\$10,064,932
Norman	-	-	\$0	-	-	\$0
Rockingham	1,352	966	\$184,523,883	2,809	1,895	\$365,049,930
Unincorporated Area	5,984	3,094	\$273,868,588	8,594	4,335	\$388,326,835
Scotland County	5,629					
East Laurinburg	178	144	\$5,606,280	178	144	\$5,606,280
Gibson	256	170	\$10,716,070	296	197	\$13,217,340
Laurinburg	2,209	1,560	\$144,496,810	4,235	3,017	\$247,561,860
Wagram	491	324	\$29,699,760	581	369	\$31,462,290
Unincorporated Area	2,495	1,522	\$218,748,060	4,281	2,700	\$321,017,500
Pee Dee Lumber Regional Total	27,919	12,481	\$1,362,664,256	33,345	18,671	\$2,036,399,368

Source: NC Department of Transportation, Local Governments

SOCIAL VULNERABILITY

Given high susceptibility across the entire Pee Dee Lumber Region, it is assumed that the total population is at risk to hazardous materials incidents. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

CRITICAL FACILITIES

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are 14 facilities located in a HAZMAT risk zone. The primary impact zone (0.5-mile buffer) includes 1 facility in the region, while the remaining facilities are in the secondary, 1-mile zone. A list of specific critical facilities and their associated risk can be found in **Table 6.25** at the end of this section.

Mobile Analysis:

The critical facility analysis for road and railroad transportation corridors revealed that there are 72 critical facilities located in the primary (0.5 mile) mobile HAZMAT buffer areas for roads and railroads throughout the region. Although this is a worst-case scenario model, it indicates that most of the critical facilities in the Pee Dee Lumber region are vulnerable to a potential mobile HAZMAT incident. Additionally, there are 75 critical facilities located in the secondary (1 mile) buffer area of both roads and railroads, accounting for approximately 79 percent of the total number of critical facilities in the region. This may be the result of many critical facilities being located near major roadways for ease of access, but it is nonetheless important to recognize what a large percentage of critical facilities in the region are located in the smaller buffer area. A list of specific critical facilities and their associated risk can be found in **Table 6.25** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in the Pee Dee Lumber Region. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area such direction and speed of wind, volume of release, etc.

6.6 CONCLUSIONS ON HAZARD VULNERABILITY

The results of this vulnerability assessment are useful in at least three ways:

- Improving our understanding of the risk associated with the natural hazards in the Pee Dee Lumber region through better understanding of the complexities and dynamics of risk, how levels of risk can be measured and compared, and the myriad of factors that influence risk. An understanding of these relationships is critical in making balanced and informed decisions on managing the risk.
- Providing a baseline for policy development and comparison of mitigation alternatives. The data used for this analysis presents a current picture of risk in the Pee Dee Lumber Region. Updating this risk "snapshot" with future data will enable comparison of the changes in risk with time. Baselines of this type can support the objective analysis of policy and program options for risk reduction in the region.
- Comparing the risk among the natural hazards addressed. The ability to quantify the risk to all these hazards relative to one another helps in a balanced, multi-hazard approach to risk management at each level of governing authority. This ranking provides a systematic framework to compare and prioritize the very disparate natural hazards that are present in the Pee Dee Lumber Region. This final step in the risk assessment provides the necessary information for local officials to craft a mitigation strategy to focus resources on only those hazards that pose the most threat to Anson, Montgomery, Richmond and Scotland counties.

Exposure to hazards can be an indicator of vulnerability. Economic exposure can be identified through locally assessed values for improvements (buildings), and social exposure can be identified by estimating the population exposed to each hazard. This information is especially important for decision-makers to use in planning for evacuation or other public safety related needs.

The types of assets included in these analyses include all building types in the participating jurisdictions. Specific information about the types of assets that are vulnerable to the identified hazards is included in each hazard subsection (for example, all building types are considered at risk to the winter storm hazard and commercial, residential, and government owned facilities are at risk to repetitive flooding, etc).

As noted previously, all existing and future buildings and populations (including critical facilities) are vulnerable to natural hazards including drought, hurricane and coastal hazards, tornadoes/thunderstorms, and severe winter weather. Some buildings may be more vulnerable to these hazards based on locations, construction, and building type. **Table 6.25** shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an "X").

TABLE 6.25: PEE DEE LUMBER CRITICAL FACILITY VULNERABILITY

		Natural									logical				Other			
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Anson Academy	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Anson Co. Early College High	Public School	Χ	Χ	Χ	Χ	Χ	Χ			Χ					Χ	Χ	Χ	Χ
Anson Community Hospice, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Anson Community Hospital	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Anson County Emergency Operations Center	Other	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Anson County Rescue Squad	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Anson County Sheriffs Dept. / Jail	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Anson EMS	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Anson Group Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Anson High School	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Anson Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Anson New Tech High	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Ansonville Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Ansonville Fire Dept. & Rescue Squad	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Ansonville Fire Dept. & Rescue Squad	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Assisted Living Home Care, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Burnsville Fire & Rescue Service	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Burnsville Fire & Rescue Service	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
City of Wadesboro Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ

		Natural								Geol	ogical		Other						
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)	
Firsthealth Home Care-Richmond	Medical Facility	Х	Х	Х	Х	Х	Х								Х	Х		Х	
Gulledge Volunteer Fire Dept. Incorporated	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ												
Gulledge Volunteer Fire Dept. Incorporated	EMS	Χ	Χ	Χ	Χ	Χ	Χ												
Heritage Hills, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ			
Holly House	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ	
Home Care Services of Anson Community Hospital	Medical Facility	X	X	Χ	Х	Χ	Х								X	Х			
Hospice of Union County, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ			
Lanesboro Fire District	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ			Х					Χ	Χ	Χ	Χ	
Liberty Home Care	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ	
Lilesville Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ	
Lilesville Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ	
Lilesville Fire Dept.	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ	
Lilesville Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ	
Morven Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ			
Morven Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ			
Morven Volunteer Fire Dept. Incorporated	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ			
Peachland Fire District of Anson County	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ	
Peachland Fire District of Anson County	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ	
Peachland-Polkton Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ			Χ					Χ	Χ	Χ	Χ	

			Natural								logical				Other	r		
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Pine Terrace Place	Medical Facility	Х	Χ	Χ	Х	Χ	Χ								Х	Х		
Sandhills Center for MH/DD/SAS-Anson Unit	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Wadesboro Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Wadesboro Fire Dept.	Fire Stations	Х	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Wadesboro Primary	Public School	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		
Alliance Medical, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Autumn Care of Biscoe	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Baaseiah Family Care Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Baaseiah Family Care Home #2	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Baaseiah Family Care Home #3	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Badin Lake Volunteer First Response & Rescue - Blaine	Fire Stations	Х	Х	Х	Х	Х	Х											
Badin Lake Volunteer First Response & Rescue - Blaine	EMS	Х	Х	Х	Х	Х	Х											
Badin Lake Volunteer First Response & Rescue - Pinehaven	Fire Stations	Х	Х	Х	Х	Х	Х											
Badin Lake Volunteer First Response & Rescue - Pinehaven	EMS	Х	Х	Х	Х	Х	Х											
Badin Lake Volunteer First Response & Rescue - Uwharrie Pointe	Fire Stations	Х	Х	Х	Х	Х	Х											

					Nat	ural				Geol	logical				Othe	•		
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Badin Lake Volunteer First Response & Rescue - Uwharrie Pointe	EMS	Х	х	Х	Х	х	Х											
Better Day-Montgomery	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
Biscoe Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ							Х	Χ	Χ	Χ	Χ
Biscoe Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ							Х	Χ	Χ	Χ	Χ
Bruton Family Care Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ											
Bruton Family Care Home #2	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Candor Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Candor Place	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Candor Volunteer Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Crowder Family Care Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Drug Education & Human Development Center	Medical Facility	Х	Х	Х	Х	X	Х								Х	Х		Х
East Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
East Montgomery High	Public School	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Emergency Medical Rescue Squad 4	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Evans Rest Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Family First Home Care, LLC	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
First Health of The Carolinas EMS Base 1	EMS	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
First Health of the Carolinas EMS Base 2	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ

					Nat	ural				Geol	logical				Other			
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
First Health of The Carolinas EMS Base 3	EMS	Х	Х	Х	Х	Х	Х							Х	Х	Х	Х	Х
First Health of The Carolinas EMS Base 7	EMS	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Firsthealth Montgomery Memorial Hospital	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Х	Χ	Χ	Χ	Χ
Geneva'S Comfort Zone	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Green Ridge Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Knights of The Roundtable Health Center	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Lake Tillery Volunteer Fire Dept. & Rescue Squad 10	Fire Stations	X	X	X	Х	X	X								Х	Х		
Lake Tillery Volunteer Fire Dept. & Rescue Squad 10	EMS	Х	Х	X	Х	Х	Х								Х	Х		
Montgomery Community Living Skills	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Montgomery County Emergency Management	Emergency Operation Center	Х	X	X	X	X	X							Х	Х	Х	X	х
Montgomery County Rescue Squad	EMS	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Montgomery County Sheriffs Dept. / Montgomery County Jail	Law Enforcement	Х	Х	Х	Х	Х	Х							х	Х	Х	Х	Х
Montgomery Group Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ		Χ
Montgomery Learning Academy	Public School	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Mount Gilead Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Mount Gilead Volunteer Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ

					Nat	ural				Geol	ogical				Other	•		
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Mt. Gilead Children's Home	Medical Facility	Х	Χ	Х	Х	Х	Х								Х	Х	Х	Х
Myrtlewood Group Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
NC State Highway Patrol Troop E District II - Substation	Law Enforcement	Х	Х	X	Х	Х	Х								Х	Х	Х	Х
Page Street Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ		Χ
Pekin Volunteer Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ			Χ					Χ	Χ		
Poplar Springs	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Sandhills Center	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
Star Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Star Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Star Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Starmont Assisted Living	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Town of Candor Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Town of Mount Gilead Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Troy Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
Troy Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
Troy Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ	Χ	Χ
US Forest Service - Uwharrie National Forest Ranger District	Law Enforcement	Х	Х	X	Х	Χ	Х								Х	Х		
Uwharrie Volunteer Fire Dept. Incorporated	Fire Stations	Х	Χ	Χ	Χ	Χ	Χ								Χ	Χ		

					Nat	ural				Geol	ogical				Other	•		
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Wadeville Volunteer Fire Dept. Incorporated	Fire Stations	Х	Х	Х	Х	Х	Х								Х	Х	Х	Χ
West Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
West Montgomery High	Public School	Х	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Wilson Family Care Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Community Based Alternatives, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Cordova Fire & Rescue	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ									Χ	Χ	Χ
Cordova Fire & Rescue	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ									Χ		Χ
Cordova Fire & Rescue	EMS	Х	Χ	Χ	Χ	Χ	Χ									Χ	Χ	Χ
Cordova Fire & Rescue	EMS	Х	Χ	Χ	Χ	Χ	Χ									Χ		Χ
Cordova School	Public School	Χ	Χ	Χ	Χ	Χ	Χ									Χ	Χ	Χ
Covington Rest Home	Medical Facility	Х	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Dennis & Rita Rape Home	Medical Facility	Х	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ		Χ
Derby Volunteer Fire Dept. Incorporated	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ											
Derby Volunteer Fire Dept. Incorporated	EMS	Χ	Χ	Χ	Χ	Χ	Χ											
East Rockingham Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ										Χ	Χ
East Rockingham Fire Dept. Incorporated	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ										Χ	Χ
East Rockingham Fire Dept. Incorporated	EMS	Χ	Χ	Χ	Χ	Χ	Χ										Χ	Χ
Ellerbe Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Ellerbe Rescue Squad Incorporated	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Ellerbe Volunteer Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		

					Nat	ural				Geol	ogical				Other	•		
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Ellerbe Volunteer Fire Dept.	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Fairview Heights Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Falling Creek	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Firsthealth Home Care-Richmond	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Firsthealth Home Care-Richmond	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Firsthealth Home Medical Equipment & Supplies	Medical Facility	X	X	X	X	X	Χ						X	Х	X	Х		Х
Firsthealth Richmond Memorial Hospital	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Fisher Adult Care, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Glenwood Rest Home #1	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Glenwood Rest Home #2	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Hamlet Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Hamlet Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Hamlet Rescue & EMS / Hamlet City Fire Dept.	Fire Stations	Х	X	Х	Х	X	Х								Х	Х	X	X
Hamlet Rescue & EMS / Hamlet City Fire Dept.	EMS	Х	Х	Х	Х	Х	Х								Х	Х	Х	Х
Hoffman Fire & Rescue	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Hoffman Fire & Rescue	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ

					Nat	ural				Geol	ogical				Other	•		
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Hoffman Fire Dept. & Rescue Squad Incorporated Station 2	Fire Stations	Х	Х	Х	Х	Х	Х								X	х	Х	Х
Hoffman Fire Dept. & Rescue Squad Incorporated Station 2	EMS	Х	Х	Х	X	Х	Х								Х	Х	Х	X
Hoffman Group Home	Medical Facility	Χ	Χ	Х	Χ	Χ	Χ								Χ	Χ	Χ	Χ
L J Bell Elementary	Public School	Χ	Х	Χ	Χ	Χ	Χ							Х	Χ	Χ		Χ
Leak Street High	Public School	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ		Χ
Mallard Lane Center	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ		Χ		Χ
Maplewood Place	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Mega Force Staffing	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Mineral Springs Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Monroe Avenue Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Morrison Correctional Institution	Public School	Χ	Χ	Χ	Χ	Χ	Χ											
Mountain Creek Volunteer Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ											
Mountain Creek Volunteer Fire Dept.	EMS	Χ	Χ	Χ	Χ	Χ	Χ											
NC Division of Forest Resources District 3 - Richmond County	Fire Stations	Х	Х	Х	X	Х	Х											
NC Division of Forest Resources District 3 - Richmond County - Headquarters	Fire Stations	Х	Х	Х	Х	Х	Х								х	Х		
NC State Highway Patrol Troop H District II	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ

					Nat	ural				Geol	ogical				Other			
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
New Hope Adult Care	Medical Facility	Х	Х	Χ	Х	Х	Х								Х	Х	Х	Х
Northside Volunteer Fire Dept. Inc. Station 1	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ											
Northside Volunteer Fire Dept. Inc. Station 1	EMS	Χ	Χ	Χ	Χ	Χ	Χ											
Northside Volunteer Fire Dept. Inc. Station 2	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ											
Northside Volunteer Fire Dept. Inc. Station 2	EMS	Χ	Χ	Χ	Χ	Χ	Χ											
Oak Ridge Manor	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Pence Place	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ	Χ	Χ
Recovery Associates (Richmond)	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Richmond 9Th Grade Academy	Public School	Χ	Χ	Χ	Χ	Χ	Χ											Χ
Richmond Adult Group Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Richmond Co Transitional	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Richmond County Emergency Management	Emergency Operation Center	Х	Х	X	Х	X	Х								Х	Х	Х	X
Richmond County Hospice Residential Facility	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Richmond County Hospice, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Richmond County Rescue Squad	EMS	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Richmond County Sheriffs Dept. / Jail	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Richmond Early College High	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Richmond House	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Richmond Juvenile Detention Ct	Public School	Χ	Χ	Χ	Χ	Χ	Χ							Χ		Χ		

					Nat	ural				Geol	ogical				Other			
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Richmond Senior High	Public School	Χ	Х	Χ	Χ	Х	Χ								Х	Х		
Rockingham Fire Dept. Station 1 - HQ	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Rockingham Fire Dept. Station 1 - HQ	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Rockingham Fire Dept. Station 2	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Rockingham Fire Dept. Station 2	EMS	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Rockingham Manor	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ		Χ
Rockingham Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ		Χ
Rockingham Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Rohanen Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ									Χ	Χ	Χ
Ronald & Vanessa Tillman	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Samaritan Colony	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Sandhills Center For MH/DD/SAS	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Sandhills Manor Group Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Sandhills Regional Medical Center	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Smith Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Somerset Court of Hamlet	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ							Χ	Χ	Χ	Χ	Χ
Southwind Group Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Spring House	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
The Hermitage Retirement Center of Rockingham	Medical Facility	Х	Х	X	Х	Х	Х						Х	Х		Х		X

					Nat	ural				Geol	ogical				Other	•		
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Unifour Nursing Service, Inc.	Medical Facility	Х	Х	Х	Х	Х	Х								X	Х	Х	Х
Washington Street Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
West Rockingham Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Alford Home	Medical Facility	Х	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Braveheart Medical Transport Inc.	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Brown Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Carver Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Century Care of Laurinburg, Inc.	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ											
College Park	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Covington Street Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Cross Creek Group Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Firsthealth Home Care-Richmond	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ
Gibson Southwest District Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Gibson Southwest District Fire Dept.	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Health Care Connections Home Care	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ											
Healthkeepers	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Hospice of Scotland County	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
I E Johnson Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ									Χ		Χ
Interim Healthcare	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Laurel Hill Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		

					Nat	ural				Geol	ogical				Other			
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Laurel Hill Fire Dept. Incorporated	Fire Stations	Х	Х	Х	Х	Х	Х								Х	Χ	Х	Х
Laurel Hill Fire Dept. Incorporated	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Laurinburg City Fire Dept. Station 1	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ
Laurinburg City Fire Dept. Station 1	EMS	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ
Laurinburg City Fire Dept. Station 2	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Laurinburg City Fire Dept. Station 2	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Laurinburg Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Lee Forest Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Malloy Therapeutic Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Maxton Vocational Center	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
McCoy Therapeutic Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ	Χ	Χ
McRae'S Therapeutic Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ	Χ	Χ
Mega Force Staffing	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
NC Division of Forest Resources District 3 - Scotland County	Fire Stations	X	Χ	X	Х	Х	Х								Х	Х		
NC State Highway Patrol Troop H District II - Substation	Law Enforcement	X	X	Х	Х	Х	Х								Х	Х		
North Laurinburg Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
North Scotland Volunteer Fire / Rescue Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
North Scotland Volunteer Fire / Rescue Dept.	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ

					Nat	ural				Geol	ogical				Other			
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Oliver Home	Medical Facility	Х	Х	Х	Х	Х	Х								Х	Х		Χ
Pategardner Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Professional Providers Home Care Agency, Inc.	Medical Facility	Х	Х	Х	Х	Х	Х								Х	Х		Х
Rainbow 66 Storehouse	Medical Facility	Χ	Х	Χ	Χ	Χ	Χ											
Ritch's Family Care Home	Medical Facility	Χ	Х	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Scotch Fair III Supervised Living Home	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Scotchfair Group Home	Medical Facility	Χ	Х	Χ	Χ	Χ	Χ								Χ	Χ		
Scotchfair Group Home #2	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Scotia Village	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Scotland County Emergency Management	Emergency Operation Center	Х	Х	Х	Х	Х	Х	Х	Х						Х	X		
Scotland County EMS	EMS	Χ	Х	Χ	Χ	Χ	Χ								Χ	Χ		
Scotland County Rescue Squad	EMS	Χ	Х	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ
Scotland County Sheriffs Dept. / Jail	Law Enforcement	Χ	Х	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Scotland Early College High	Public School	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ		
Scotland Enterprises	Medical Facility	Χ	Х	Χ	Χ	Χ	Χ									Χ		
Scotland Forest Home	Medical Facility	Χ	Х	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Scotland High School	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Scotland House	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ

					Nat	ural				Geo	logical				Other			
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)
Scotland Memorial Hosp. Cardiac Rehabilitation Prog	Medical Facility	Х	Х	Х	Х	Х	Х								х	Х		
Scotland Memorial Hospital & Edwin Morgan Center	Medical Facility	Х	Х	Х	Х	Х	Х								Х	Х		
Shaw Academy	Public School	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ						Χ	Χ	Χ	Χ
Shining Star Clubhouse	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
South Scotland Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ										Χ	Χ
Southeastern Regional MH/DD/SAS, Scotland Center	Medical Facility	Х	Х	Х	Х	X	Х	Х	Х						Х	Х		
Spring Hill Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
Spring Hill-Friendship Fire Dept.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Spring Hill-Friendship Fire Dept.	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
Stewartsville Volunteer Fire Dept. Inc.	Fire Stations	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Stewartsville Volunteer Fire Dept. Inc.	EMS	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Sycamore Lane Middle	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		
The Meadows of Aberdeene	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
The Meadows of Laurinburg	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ									Χ		
United Families #1	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
United Families #3	Medical Facility	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ
Wagram Police Dept.	Law Enforcement	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ

					Nat	ural				Geol	ogical				Other				
Facility Name	Facility Type	Drought	Excessive Heat	Hurricane & Coastal Hazards	Tornadoes/Thunderstorms	Severe Winter Weather	Earthquakes	Flood 100-year	Flood 500-year	Landslide - High Incidence	Landslide - Mod. Incidence	Wildfires	Fixed HAZMAT 0.5 Mile	Fixed HAZMAT 1 Mile	Mobile HAZMAT 0.5 Mile (Road)	Mobile HAZMAT 1 Mile (Road)	Mobile HAZMAT 0.5 Mile (Rail)	Mobile HAZMAT 1 Mile (Rail)	
Wagram Primary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ	Χ	Χ	
Washington Park Elementary	Public School	Χ	Χ	Χ	Χ	Χ	Χ								Χ	Χ		Χ	

SECTION 7 CAPABILITY ASSESSMENT

This section of the Plan discusses the capability of the counties and municipalities in the Pee Dee Lumber Region to implement hazard mitigation activities. It consists of the following four subsections:

- ♦ 7.1 What is a Capability Assessment?
- ♦ 7.2 Conducting the Capability Assessment
- 7.3 Capability Assessment Findings
- 7.4 Conclusions on Local Capability

7.1 WHAT IS A CAPABILITY ASSESSMENT?

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 projects¹. As in any planning process, it is important to try to establish which goals, objectives, and/or 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, number 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, or 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 Pee Dee Lumber Region serves as a critical planning step and an integral part of the foundation for designing an effective hazard mitigation strategy. Coupled with the Risk Assessment, the Capability Assessment helps identify and target meaningful mitigation actions for incorporation in the Mitigation Strategy portion of the Regional Hazard Mitigation Plan. It not only helps establish the goals and objectives for the region to pursue under this Plan, but it also ensures

¹ While the Final Rule for implementing the Disaster Mitigation Act of 2000 does not require a local capability assessment to be completed for local hazard mitigation plans, it is a critical step in developing a mitigation strategy that meets the needs of the region while taking into account their own unique abilities. The Rule does state that a community's mitigation strategy should be "based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools" (44 CFR, Part 201.6(c)(3)).

that those goals and objectives are realistically achievable under given local conditions.

7.2 CONDUCTING THE CAPABILITY ASSESSMENT

In order to facilitate the inventory and analysis of local government capabilities within the Pee Dee Lumber counties and municipalities, a detailed Capability Assessment Survey² was completed for each of the participating jurisdictions based on the information found in existing hazard mitigation plans and local government websites. The survey questionnaire compiled 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. The current political climate, an important consideration for any local planning or decision-making process, was also evaluated with respect to hazard mitigation.

At a minimum, survey results provide an extensive inventory of existing local plans, ordinances, programs, and resources that are in place or under development in addition to their overall effect on hazard loss reduction. However, the survey instrument can also serve to identify gaps, weaknesses, or conflicts that counties and local jurisdictions can recast as opportunities for specific actions to be proposed as part of the hazard mitigation strategy.

The information collected in the survey questionnaire was incorporated into a database for further analysis. A general scoring methodology³ was then applied to quantify each jurisdiction's overall capability. According to the scoring system, each capability indicator was assigned a point value based on its relevance to hazard mitigation.

Using this scoring methodology, a total score and an overall capability rating of "high," "moderate," or "limited" could be determined according to the total number of points received. These classifications are designed to provide nothing more than a general assessment of local government capability. The results of this capability assessment provide critical information for developing an effective and meaningful mitigation strategy.

7.3 CAPABILITY ASSESSMENT FINDINGS

The findings of the capability assessment are summarized in this Plan to provide insight into the relevant capacity of the Pee Dee Lumber Region to implement hazard mitigation activities. All information is based upon the review of existing hazard mitigation plans and local government websites through the Capability Assessment Survey and input provided by local government officials during meetings of the Pee Dee Lumber Regional Hazard Mitigation Planning Committee.

7.3.1 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

² The Capability Assessment Survey instrument is available in Appendix B.

³ The scoring methodology used to quantify and rank the region's capability can be found in Appendix B.

transportation planning; 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 and programs that are in place or under development for the Pee Dee Lumber Region 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 7.1 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for the Pee Dee Lumber Region. A checkmark (\checkmark) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the Pee Dee Lumber Regional Hazard Mitigation Plan.

TABLE 7.1: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning / Regulatory Tool	ANSON COUNTY	Ansonville	Lilesville	McFarlen	Morven	Peachland	Polkton	Wadesboro	MONTGOMERY COUNTY	Biscoe	Candor	Mount Gilead	Star	Troy	RICHMOND COUNTY	Dobbins Heights	Ellerbe	Hamlet	Hoffman	Norman	Rockingham	SCOTLAND COUNTY	East Laurinburg	Gibson	Laurinburg	Wagram
Hazard Mitigation Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	\checkmark	✓	\checkmark	✓	✓	✓	\checkmark	✓	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Comprehensive Land							,	,				,			,						,	,			,	
Use Plan	✓						✓	✓				✓			✓						✓	✓			✓	
Floodplain	1	✓					✓																			
Management Plan Open Space	ľ	•					•																			
Management Plan																										
(Parks &																										
Rec/Greenway Plan)																										
Stormwater																										
Management															√										1	
Plan/Ordinance															V										V	
Natural Resource Protection Plan																										
Flood Response Plan																										
Emergency Operations																										
Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			✓	\checkmark						✓	\checkmark			✓	
Continuity of																										
Operations Plan																										
Evacuation Plan	✓	✓	✓	✓	✓	✓	✓	✓																		
Disaster Recovery Plan																										

Planning / Regulatory Tool	ANSON COUNTY	Ansonville	Lilesville	McFarlen	Morven	Peachland	Polkton	Wadesboro	MONTGOMERY COUNTY	Biscoe	Candor	Mount Gilead	Stal	ko II	RICHMOND COUNTY	Dobbins Heights	Ellerbe	Hamlet	Hoffman	Norman	Rockingham	SCOTLAND COUNTY	East Laurinburg	Gibson	Laurinburg	Wagram
Capital Improvements Plan							✓ ,	✓														√				
Economic																										
Development Plan Historic Preservation																										
Plan																										
Flood Damage Prevention Ordinance	✓		✓			✓	✓ ,	/ _v	/				✓	•	/			✓			✓	✓	✓		✓	
Zoning Ordinance	✓	✓	✓	✓	✓	✓	,	< v	/	✓	✓	✓ v	/ /	,	/			✓			✓	✓			\checkmark	
Subdivision Ordinance	✓				✓	✓	✓ ,	✓ v	/	✓		✓	✓	,	/						\checkmark	\checkmark			\checkmark	
Unified Development Ordinance							./														√				./	
Post-Disaster Redevelopment Ordinance							•														•				•	
Building Code	✓	✓			✓	✓	✓ ,	✓			✓			•	/						\checkmark	✓			\checkmark	
Fire Code National Flood	✓					✓	✓							•							✓	✓			✓	
Insurance Program (NFIP) NFIP Community Rating System	✓		✓			√	✓ ,	✓					✓	,	/			✓			✓	✓	✓		✓	

A more detailed discussion on the region's planning and regulatory capability follows.

7.3.2 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. In reality, each phase is interconnected with hazard mitigation, as **Figure 7.1** suggests. Opportunities to reduce potential losses through mitigation practices are most often implemented before disaster strikes, such as the elevation of flood prone structures or the continuous enforcement of policies that prevent and regulate development that is vulnerable to hazards due to its location, design, or other characteristics. Mitigation opportunities will also be presented during immediate preparedness or response activities, such as installing storm shutters in advance of a hurricane, and certainly during the long-term recovery and redevelopment process following a hazard event.



FIGURE 7.1: THE FOUR PHASES OF EMERGENCY MANAGEMENT

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 Pee Dee Lumber Region'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 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.

♦ Each of the four counties participating in this multi-jurisdictional plan has previously adopted hazard mitigation plans. Each participating jurisdiction was included their respective county's plan except for the Town of Dobbins Heights, which is a new participant, and the City of Rockingham, which adopted its own 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. 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.

♦ None of the four counties participating in this multi-jurisdictional plan have adopted a disaster recovery plan. The counties should consider developing a plan to guide the

recovery and reconstruction process following a disaster.

Emergency Operations Plan: An emergency operation plan outlines responsibilities and the means by which resources are deployed during and following an emergency or disaster.

- Anson County, Montgomery County, Richmond County, and Scotland each maintain emergency operations plans through their respective Emergency Management Departments.
- Anson County maintains a countywide emergency operation plan that covers all of its municipalities (The Towns of Ansonville, Lilesville, McFarlan, Morven, Peachland, Polkton, and Wadesboro).
- ♦ The Towns of Mount Gilead and Troy each maintain an emergency response plan.
- The City of Rockingham has adopted a city emergency operations plan.
- ♦ The City of Laurinburg has adopted the Scotland County Emergency Operations Plan.

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.

♦ None of the counties participating in this multi-jurisdictional plan have adopted continuity of operations plans.

7.3.3 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 Capability Assessment Survey also asked questions regarding general planning capabilities and the degree to which hazard mitigation is integrated into other on-going planning efforts in the Pee Dee Lumber Region.

Comprehensive Land Use Plan: A comprehensive land use 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.

- ♦ Anson County adopted an update to its Future Land Use Plan in 2009. The Town of Wadesboro also adopted an updated Future Land Use Plan in 2009 and the Town of Polkton adopted its first Future Land Use Plan in 2010.
- Although Montgomery County does not have a comprehensive land use plan in place,

Mount Gilead adopted a Land Development Plan in 1998 that recognizes flood hazards and steep banks as development constraints. However, neither the County nor its municipalities have a current land use map.

- ♦ Richmond County has adopted a Strategic Land Use Plan (2000). The City of Rockingham is the only municipality in the County that has adopted its own land use plan and it identifies the future intended land uses in the city.
- Scotland County and the City of Laurinburg have each adopted a land use plan.

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.

- ♦ None of the participating counties in this multi-jurisdictional plan maintain a capital improvements plan.
- ♦ The Towns of Peachland and Polkton have capital improvements plans in place.
- ♦ The City of Rockingham maintains a five-year capital improvement plan that is updated on an annual basis in an attempt forecast and plan for capital expenditures.

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.

♦ None of the counties participating in this multi-jurisdictional plan have a historic preservation plan.

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.

- ♦ Although Anson County has adopted a zoning ordinance, the majority of the unincorporated County is not zoned. The County is currently working to update the ordinance and complete countywide zoning to accommodate growth while preserving environmentally sensitive areas. All of the municipalities in the County have adopted zoning ordinances except for the Town of Polkton.
- Montgomery County adopted countywide zoning in 2000 and all of the municipalities in

the County also have zoning ordinances in place.

- Richmond County also enforces a countywide zoning ordinance, but only the Cities of Hamlet and Rockingham have adopted city zoning ordinances.
- Scotland County and the City of Laurinburg both have adopted and enforce zoning ordinances.

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.

- Anson County has a subdivision ordinance that was adopted by the Board of County Commissioners and applies to all areas of unincorporated Anson County. The Towns of Peachland, Polkton, and Wadesboro have also adopted subdivision ordinances.
- Montgomery County has adopted a subdivision ordinance that includes regulations requiring developers to install adequate drainage facilities to reduce exposure to flood damage. The Towns of Biscoe, Mount Gilead, and Star also have some subdivision regulations in place.
- Richmond County has a subdivision ordinance in place that includes regulations prohibiting land subject to flooding, irregular drainage conditions, or excessive flooding from being platted for residential use unless the hazards can be and are corrected. The City of Rockingham has also adopted a subdivision ordinance.
- ◆ The Scotland County Commissioners have adopted a subdivision ordinance that regulates the division of land within the unincorporated areas of the County. The stated intents include preventing flood damage, preventing and controlling erosion, and preserving natural vegetation and cover. The City of Laurinburg also includes subdivision regulations in its Unified Land Development Ordinance.

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.

- North Carolina has a state compulsory building code, which applies throughout the state; however, jurisdictions may adopt codes if approved as providing adequate minimum standards. All of the participating counties have adopted a building code. The building code is enforced by each county's building inspector.
- ◆ The Cities of Rockingham and Laurinburg have their own inspections departments that enforce the building code within their city limits.

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)⁴. 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 the 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.

7.3.4 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; however, program participation is strongly encouraged by FEMA as a first step for implementing and sustaining an effective hazard mitigation program. It is therefore used as part of this assessment as a key indicator for measuring local capability.

In order for a county or municipality to participate in 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 a 100-year flood event and that new development in the floodplain will not exacerbate existing flood problems or increase damage to other properties.

A key service provided by the NFIP is the mapping of identified flood hazard areas. Once completed, 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 7.2 provides NFIP policy and claim information for each participating jurisdiction in the Pee Dee Lumber Region.

⁴ Participation in BCEGS is voluntary and may be declined by local governments if they do not wish to have their local building codes evaluated.

TABLE 7.2: NFIP POLICY AND CLAIM INFORMATION

	IADLL 7.2.	NEIP PULICY	AND CLAIM I	WI ORMATIO	IV	
Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
ANSON COUNTY	6/18/90	10/16/08	3	\$413,000		
Ansonville						
Lilesville	4/13/12	(NSFHA)				
McFarlan						
Morven						
Peachland	7/1/87	10/16/08				
Polkton	8/20/08	10/16/08				
Wadesboro	8/19/86	10/16/08(M)	1	\$350,000	1	\$6,579.63
MONTGOMERY COUNTY	2/20/97	6/16/09	33	\$8,284,500	56	\$460,929.26
Biscoe	08/05/19	6/16/09				
Candor						
Mount Gilead						
Star						
Troy	1/2/08	6/16/09	1	\$350,000		
RICHMOND COUNTY	9/6/89	7/7/14	35	\$2,898,800	1	\$27,933.72
Dobbins Heights						
Ellerbe						
Hamlet	7/2/87	9/3/08	2	\$313,700		
Hoffman	7/28/79	9/3/08				
Norman						
Rockingham	9/6/89	9/3/08	22	\$4,388,700	6	\$69,600.92
SCOTLAND COUNTY	12/16/88	12/6/19	13	\$3,006,000		
East Laurinburg	8/15/07	7/7/14				
Gibson						
Laurinburg	1/3/86	7/7/14	25	\$6,282,200	1	\$32,326.63
Wagram	7/25/14	7/7/14				

(M) – No Elevation Determined, all Zone A, C and X (NSFHA) – No Special Flood Hazard Area, all Zone C

Source: NFIP claims and policy information as of 2/29/12; NFIP Community Status information as of 5/11/12

Community Rating System: 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 by 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 rating. Class ratings, which range from 10 to 1, are tied to flood insurance premium reductions as shown in **Table 7.3**. As class rating improves (the lower the number the better), the percent reduction in flood insurance premiums for NFIP policyholders in that community increases.

TABLE 7.3: CRS PREMIUM DISCOUNTS, BY CLASS

CRS Class	Premium Reduction
1	45%
2	40%
3	35%
4	30%
5	25%
6	20%
7	15%
8	10%
9	5%
10	0

Source: FEMA

Community participation in the CRS is voluntary. Any community that is in full compliance with the rules and regulations of the NFIP may apply to FEMA for a CRS classification better than class 10. The CRS application process has been greatly simplified over the past several years based on community comments. Changes were made with the intent to make the CRS more user-friendly and make extensive technical assistance available for communities who request it.

None of the jurisdictions currently participate in the CRS. Participation in the CRS program should be considered as a mitigation action by the counties and municipalities. The program would be most beneficial to Richmond County, Montgomery County, the City of Laurinburg, and the City of Rockingham, which have 35, 33, 25, and 22 NFIP policies, respectively.

Flood Damage Prevention Ordinance: A flood damage prevention ordinance establishes minimum building standards in the floodplain with the intent to minimize public and private losses due to flood conditions.

♦ All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. All four of the counties participating in this hazard mitigation plan also participate in the NFIP and they all have adopted flood damage prevention

regulations. The following municipalities are also NFIP participants: Lilesville, Peachland, Polkton, Wadesboro, Troy, Hamlet, Rockingham, East Laurinburg and Laurinburg.

Floodplain Management Plan: A floodplain management plan (or a flood mitigation plan) provides a framework for action regarding corrective and preventative measures to reduce flood-related impacts.

♦ Anson County and the Towns of Ansonville and Polkton have developed floodplain management plans.

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.

- None of the participating counties or municipalities have an open space management plan.
- Anson County and all of its municipalities have however adopted a Voluntary Agriculture Ordinance to encourage the preservation and protection of farmland from non-farm 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.

- Richmond County is the only participating county that has adopted a stormwater management plan.
- ♦ The City of Laurinburg is the only participating municipality that has adopted a stormwater management ordinance.
- Anson County and the Town of Polkton have developed the Yadkin-Pee Dee River Basin Plan to help control runoff and pollution of stormwater within these two river basins. The plan includes provisions for protection of riparian buffers along all water bodies and use of swales, created wetlands, and detention or retention ponds.

7.3.5 Administrative 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 if there are adequate personnel resources to complete these activities. 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 7.4 provides a summary of the Capability Assessment Survey results for the Pee Dee Lumber Region with regard to relevant staff and personnel resources. A checkmark (\checkmark) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE 7.4: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personal Resource	ANSON COUNTY	Ansonville	Lilesville	McFarlan	Morven	Peachland	Polkton	Wadesboro	MONTGOMERY COUNTY	Biscoe	Candor	Mount Gilead	Star	Troy	RICHMOND COUNTY	Dobbins Heights	Ellerbe	Hamlet	Hoffman	Norman	Rockingham	SCOTLAND COUNTY	East Laurinburg	Gibson	Laurinburg	Wagram
Planners with knowledge of land development / land management practices	✓								✓					✓	✓						✓	✓			✓	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	✓								✓						✓						✓	✓			✓	
Planners or engineers with an understanding of natural and/or human-caused hazards	✓								✓					✓	✓						✓	✓			✓	
Emergency Manager	✓														✓							✓				
Floodplain Manager	✓		✓			✓	✓	✓	✓					✓	✓			✓			✓	✓	✓		✓	
Land Surveyors Scientists familiar with the hazards of the community	✓								✓						✓							✓				
Staff with education or expertise to assess the community's vulnerability to hazards	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓
Personnel skilled in GIS and/or HAZUS	✓								✓						✓						✓	✓			✓	
Resource development staff or grant writers															✓						✓					

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

7.3.6 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 the region's fiscal capability through the identification of locally available financial resources.

Table 7.5 provides a summary of the results for the Pee Dee Lumber Region with regard to relevant fiscal resources. A checkmark (\checkmark) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plans.

Mount Gilead east Laurinbur Peachland Polkton Fiscal Tool / Resource Capital Improvement Programming Community Development Block Grants (CDBG) Special Purpose Taxes (or taxing districts) Gas / Electric Utility Fees Water / Sewer Fees Stormwater Utility Fees **Development Impact Fees** General Obligation, Revenue, and/or Special Tax Bonds Partnering Arrangements or Intergovernmental Agreements

TABLE 7.5: RELEVANT FISCAL RESOURCES

7.3.7 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 Capability Assessment Survey was used to capture information on political capability of the Pee Dee Lumber Region. Previous county-level hazard mitigation plans were reviewed for 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 (i.e., building codes, floodplain management, etc.).

- ♦ The previous county hazard mitigation plans identified existing ordinances that address natural hazards or are related to hazard mitigation such as emergency management, flood damage prevention, watershed protection, zoning, and subdivision.
- Anson County has had difficulty in effectively or consistently using and implementing the previously adopted hazard mitigation plan. The County is dedicated to correcting any deficiencies with reporting, updating, and implementing the hazard mitigation plan.
- Montgomery County has extremely limited resources and has limited capacity to effectively mitigate against most natural hazards. The County is committed to building local government capacity to more adequately evaluate and address the identified hazards and hazard-prone areas.
- Most Richmond County residents are quite knowledgeable about the potential hazards that face their communities, and in recent years, they have become more familiar with mitigation. This knowledge combined with the recent history of natural disasters in North Carolina creates a political climate that is favorable for supporting and advancing future mitigation.
- Scotland County has tried to insert mitigation into everyday decision-making to help de-politicize the issue. Public education and awareness campaigns about the economic efficiency and social utility of mitigation can be used to help foster general acceptance by County residents, and in turn politicians.

7.4 CONCLUSIONS ON LOCAL CAPABILITY

In order to form meaningful conclusions on the assessment of local capability, a quantitative scoring methodology was designed and applied to results of the Capability Assessment Survey. This methodology, further described in Appendix B, attempts to assess the overall level of capability of the Pee Dee Lumber Region to implement hazard mitigation actions.

The overall capability to implement hazard mitigation actions varies among the participating jurisdictions. For planning and regulatory capability, the majority of the jurisdictions are in the limited range. There is more variation in the administrative and technical capability among the jurisdictions with larger jurisdictions generally having greater staff and technical resources. All of jurisdictions are in the limited range for fiscal capability.

Table 7.6 shows the results of the capability assessment using the designed scoring methodology. The capability score is based solely on the information found in existing hazard mitigation plans and readily

available on the jurisdictions' government websites. According to the assessment, the average local capability score for all responding jurisdictions is 13.4, which falls into the limited capability ranking.

TABLE 7.6: CAPABILITY ASSESSMENT RESULTS

Jurisdiction	Overall Capability Score	Overall Capability Rating
ANSON COUNTY	38	Moderate
Ansonville	11	Limited
Lilesville	10	Limited
McFarlan	6	Limited
Morven	6	Limited
Peachland	17	Limited
Polkton	23	Moderate
Wadesboro	20	Moderate
MONTGOMERY COUNTY	27	Moderate
Biscoe	7	Limited
Candor	7	Limited
Mount Gilead	12	Limited
Star	6	Limited
Troy	12	Limited
RICHMOND COUNTY	37	Moderate
Dobbins Heights	1	Limited
Ellerbe	6	Limited
Hamlet	10	Limited
Hoffman	6	Limited
Norman	5	Limited
Rockingham	31	Moderate
SCOTLAND COUNTY	33	Moderate
East Laurinburg	8	Limited
Gibson	5	Limited
Laurinburg	26	Moderate
Wagram	5	Limited

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 9; therefore, each jurisdiction addresses their ability to expand on and improve their existing capabilities through the identification of their Mitigation Actions.

7.4.1 Linking the Capability Assessment with the Risk Assessment and

the Mitigation Strategy

The conclusions of the Risk Assessment and Capability Assessment serve as the foundation for the development of a meaningful hazard mitigation strategy. During the process of identifying specific mitigation actions to pursue, the Regional Hazard Mitigation Planning Committee considered not only each jurisdiction's level of hazard risk, but also their existing capability to minimize or eliminate that risk.

SECTION 8

MITIGATION STRATEGY

This section of the Plan provides the blueprint for the participating jurisdictions in the Pee Dee Lumber Region to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Pee Dee Lumber Regional Hazard Mitigation Planning Committee and the findings and conclusions of the *Capability Assessment* and *Risk Assessment*. It consists of the following five subsections:

- ♦ 8.1 Introduction
- 8.2 Mitigation Goals
- ♦ 8.3 Identification and Analysis of Mitigation Techniques
- ♦ 8.4 Selection of Mitigation Techniques for the Pee Dee Lumber Region
- ♦ 8.5 Plan Update Requirement

8.1 INTRODUCTION

The intent of the Mitigation Strategy is to provide the Pee Dee Lumber Region with the goals that will serve as guiding principles for future mitigation policy and project administration, along with an analysis of mitigation techniques deemed available to meet those goals and reduce the impact of identified hazards. It is designed to be comprehensive, strategic, and functional in nature:

- ♦ In being comprehensive, the development of the strategy includes a thorough review of all hazards and identifies extensive mitigation measures intended to not only reduce the future impacts of high-risk hazards, but also to help the region achieve compatible economic, environmental, and social goals.
- ♦ In being *strategic*, the development of the strategy ensures that all policies and projects proposed for implementation are consistent with pre-identified, long-term planning goals.
- ♦ In being functional, each proposed mitigation action is linked to established priorities and assigned to specific departments or individuals responsible for their implementation with target completion deadlines. When necessary, funding sources are identified that can be used to assist in project implementation.

The first step in designing the Mitigation Strategy includes the identification of mitigation goals. Mitigation goals represent broad statements that are achieved through the implementation of more specific mitigation actions. These actions include both hazard mitigation policies (such as the regulation of land in known hazard areas through a local ordinance) and hazard mitigation projects that seek to address specifically targeted hazard risks (such as the acquisition and relocation of a repetitive loss

structure).

The second step involves the identification, consideration, and analysis of available mitigation measures to help achieve the identified mitigation goals. This is a long-term, continuous process sustained through the development and maintenance of this Plan. Alternative mitigation measures will continue to be considered as future mitigation opportunities are identified, as data and technology improve, as mitigation funding becomes available, and as this Plan is maintained over time.

The third and last step in designing the Mitigation Strategy is the selection and prioritization of specific mitigation actions for the Pee Dee Lumber Region (provided separately in Section 9: *Mitigation Action Plan*). Each county and participating jurisdiction has its own Mitigation Action Plan (MAP) that reflects the needs and concerns of that jurisdiction. The MAP represents an unambiguous and functional plan for action and is considered to be the most essential outcome of the mitigation planning process.

The MAP includes a prioritized listing of proposed hazard mitigation actions (policies and projects) for the Pee Dee Lumber counties and jurisdictions to complete. Each action has accompanying information, such as those departments or individuals assigned responsibility for implementation, potential funding sources, and an estimated target date for completion. The MAP provides those departments or individuals responsible for implementing mitigation actions with a clear roadmap that also serves as an important tool for monitoring success or progress over time. The cohesive collection of actions listed in the MAP can also serve as an easily understood menu of mitigation policies and projects for those local decision makers who want to quickly review the recommendations and proposed actions of the Regional Hazard Mitigation Plan.

In preparing each Mitigation Action Plan for the Pee Dee Lumber Region, officials considered the overall hazard risk and capability to mitigate the effects of hazards as recorded through the risk and capability assessment process, in addition to meeting the adopted mitigation goals and unique needs of the community.

8.1.1 Mitigation Action Prioritization

All existing mitigation actions found in the Mitigation Action Plan were previously prioritized by the participating jurisdictions. For the 2022 update of the plan the members of the Regional Hazard Mitigation Planning Committee were asked, as part of the process of providing a status update for each action, to make sure that the assigned priority for each action was still appropriate. Prioritization of the proposed mitigation actions was based on the following strategies:

- 1. High Priority Highly cost-effective, administratively feasible and politically feasible strategies that should be implemented in fiscal years 2022/2023 and 2023/2024 and be continued.
- Medium Priority Strategies that have at least two of the following characteristics (but not all three) and should be implemented in fiscal years 2023/2024 to 2024/2025:
 - a. Highly cost-effective; or
 - b. Administratively feasible, given current levels of staffing and resources; or
 - c. 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 2026/2027):
 - d. Highly cost-effective; or

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

The point of contact for each county helped coordinate the prioritization process by reviewing each action and working with the lead agency/department responsible to determine a priority for each action using the six factors listed above.

Using these criteria, actions were classified as high, moderate, or low priority by the participating jurisdiction officials.

8.2 MITIGATION GOALS

44 CFR Requirement

44 CFR Part 201.6(c)(3)(i): The mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

The primary goal of all local governments is to promote the public health, safety, and welfare of its citizens. In keeping with this standard, the Pee Dee Lumber counties and the participating municipalities have developed five goal statements for local hazard mitigation planning in the region.

As part of the 2022 plan update, the existing mitigation goals for the region were presented, reviewed, voted on, and accepted by the Planning Committee at the second Regional Hazard Mitigation Planning Committee meeting. Each goal, purposefully broad in nature, serves to establish parameters that were used in developing more mitigation actions. The Pee Dee Lumber Regional Mitigation Goals are presented in Table 8.1. Consistent implementation of actions over time will ensure that community goals are achieved.

TABLE 8.2: PEE DEE LUMBER REGIONAL MITIGATION GOALS

	Goal
Goal #1	Increase public awareness of hazard mitigation and hazard risk.
Goal #2	Enhance existing or create new policies and ordinances that will help reduce the damaging effects of natural hazards.
Goal #3	Increase capabilities to support and implement effective mitigation measures.

	Goal
Goal #4	Protect the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation projects.
Goal #5	Encourage conservation of natural environments including forests, surface waters, wetlands, floodplains, and stream corridors.

8.3 IDENTIFICATION AND ANALYSIS OF MITIGATION TECHNIQUES

44 CFR Requirement

44 CFR Part 201.6(c)(3)(ii): The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effect of each hazard, with particular emphasis on new and existing buildings and infrastructure.

In formulating the Mitigation Strategy for the Pee Dee Lumber Region, a wide range of activities were considered in order to help achieve the established mitigation goals, in addition to addressing any specific hazard concerns. These activities were discussed during the Pee Dee Lumber Regional Hazard Mitigation Planning Committee meetings. In general, all activities considered by the Regional Hazard Mitigation Planning Committee can be classified under one of the following six broad categories of mitigation techniques: Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, and Public Awareness and Education. These are discussed in detailbelow.

8.3.1 Prevention

Preventative activities are intended to keep hazard problems from getting worse, and are typically administered through government programs or regulatory actions that influence the way land is developed and buildings are built. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:

- Planning and zoning
- Building codes
- Open space preservation
- Floodplain regulations
- ♦ Stormwater management regulations
- Drainage system maintenance

- ♦ Capital improvements programming
- Riverine / fault zone setbacks

8.3.2 Property Protection

Property protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations. Examples include:

- Acquisition
- Relocation
- Building elevation
- ♦ Critical facilities protection
- Retrofitting (e.g., windproofing, floodproofing, seismic design techniques, etc.)
- Safe rooms, shutters, shatter-resistant glass
- **♦** Insurance

8.3.3 Natural Resource Protection

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, wetlands, steep slopes, and sand dunes. Parks, recreation, or conservation agencies and organizations often implement these protective measures. Examples include:

- Floodplain protection
- Watershed management
- Riparian buffers
- Forest and vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.)
- Erosion and sediment control
- Wetland preservation and restoration
- Habitat preservation
- Slope stabilization

8.3.4 Structural Projects

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- Reservoirs
- Dams / levees / dikes / floodwalls
- Diversions / detention / retention
- Channel modification
- Storm sewers

8.3.5 Emergency Services

Although not typically considered a "mitigation" technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- Warning systems
- Evacuation planning and management
- Emergency response training and exercises
- Sandbagging for flood protection
- Installing temporary shutters for wind protection

8.3.6 Public Education and Awareness

Public education and awareness activities are used to advise residents, elected officials, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- Outreach projects
- Speaker series / demonstration events
- ♦ Hazard map information
- ♦ Real estate disclosure
- Library materials
- School children educational programs
- Hazard expositions

8.3.7 SELECTION OF MITIGATION TECHNIQUES FOR THE PEE DEE LUMBER REGION

In order to determine the most appropriate mitigation techniques for the communities in the Pee Dee

Lumber Region, the Regional Hazard Mitigation Planning Committee members thoroughly reviewed and considered the findings of the *Capability Assessment* and *Risk Assessment* to determine the best activities for their respective communities. Other considerations included the effect of each mitigation action on overall risk to life and property, its ease of implementation, its degree of political and community support, its general cost-effectiveness, and funding availability (if necessary).

8.4 PLAN UPDATE REQUIREMENT

In keeping with FEMA requirements for plan updates, the Mitigation Actions identified in the previous Pee Dee Lumber Region regional plan was evaluated to determine their 2022 implementation status. Updates on the implementation status of each action are provided. The mitigation actions provided in Section 9: Mitigation Action Plan include the mitigation actions from the previous plans as well as any new mitigation actions proposed through the 2022 planning process.

SECTION 9 MITIGATION ACTION PLAN

This section of the plan provides the mitigation strategies that the Counties and municipalities in the Pee Dee Lumber Region have identified to meet their mitigation goals. It consists of the following two subsections:

- 9.1 Overview
- 9.2 Mitigation Action Plans

44 CFR Requirement

44 CFR Part 201.6(c)(3)(iii): The mitigation strategy shall include an action plan describing how the actions identified in paragraph (c)(2)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction.

9.1 OVERVIEW

As described in the previous section, the Mitigation Action Plan, or MAP, provides a functional plan of action for each jurisdiction. It is designed to achieve the mitigation goals established in Section 8: *Mitigation Strategy* and will be maintained on a regular basis according to the plan maintenance procedures established in Section 10: *Plan Maintenance*.

Each proposed mitigation action has been identified as an effective measure (policy or project) to reduce hazard risk for the Pee Dee Lumber Region. Each action is listed in the MAP in conjunction with background information such as hazard(s) addressed, relative priority, and estimated cost. Other information provided in the MAP includes potential funding sources to implement the action should funding be required (not all proposed actions are contingent upon funding). Most importantly, implementation mechanisms are provided for each action, including the designation of a lead agency or department responsible for carrying the action out as well as a timeframe for its completion. These implementation mechanisms ensure that the Pee Dee Lumber Regional Hazard Mitigation Plan remains a functional document that can be monitored for progress over time. The proposed actions are not listed in priority order, though each has been assigned a priority level of "high," "moderate," or "low" as described below and in Section 8 (page 8.2).

The Mitigation Action Plan is organized by mitigation strategy category (Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, or Public Education and Awareness). The following are the key elements described in the Mitigation Action Plan:

- ♦ Hazard(s) Addressed—Hazard which the action addresses.
- ♦ Relative Priority—High, moderate, or low priority as assigned by the jurisdiction.

- ♦ Lead Agency/Department—Department responsible for undertaking the action.
- Estimated Cost—Anticipated cost of the action.
- ♦ Potential Funding Sources—Local, State, or Federal sources of funds are noted here, where applicable.
- ♦ Implementation Schedule—Date by which the action the action should be completed. More information is provided when possible.
- ♦ Implementation Status (2022)—Indication of completion, progress, deferment, or no change since the previous plan. If the action is new, that will be noted here.

9.2 MITIGATION ACTION PLANS

The mitigation actions proposed by each of the participating jurisdictions are listed in 26 individual MAPs on the following pages. **Table 9.1** shows the location of each jurisdiction's MAP within this section as well as the number of mitigation actions proposed by each jurisdiction. Mitigation actions from previous mitigation plans that applied to all jurisdictions in a County were assigned to each jurisdiction so that each jurisdiction may weigh-in on the progress made in implementing that action in their jurisdiction.

TABLE 9.1: INDIVIDUAL MAP LOCATIONS

	TI INDIVIDONE PILIT ECCNIN	
Location	Page	Number of Mitigation Actions
Anson County	9:3	22
Ansonville	9:9	24
Lilesville	9:14	22
McFarlan	9:20	22
Morven	9:26	22
Peachland	9:32	22
Polkton	9:38	22
Wadesboro	9:43	22
Montgomery County	9:49	12
Biscoe	9:52	14
Candor	9:55	13
Mount Gilead	9:58	14
Star	9:61	14
Troy	9:64	21
Richmond County	9:68	29
Dobbins Heights	9:75	10
Ellerbe	9:78	15
Hamlet	9:83	13
Hoffman	9:87	9
Norman	9:89	10
Rockingham	9:92	34
Scotland County	9:104	14
East Laurinburg	9:109	18
Gibson	9:115	19
Laurinburg	9:121	12
Wagram	9:125	19

Anson County Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Complete the zoning process in the unincorporated areas of Anson County and the Town of Polkton.	All	High	County Planning and Zoning	Unknown	Local	2023-2028	The County is currently working on completing the zoning for these areas.
P-2	Update the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Restrict inappropriate districts and uses in environmentally sensitive areas	Flood	High	County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.
P-3	Create an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, federal and state freshwater wetlands.	Flood	Moderate	County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
P-4	Investigate developing effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Create regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and perennial waterways located throughout the county.	All	Moderate	County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this since the previous plan.
P-6	Investigate the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this since the previous plan.
P-7	Develop highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this since the previous plan.
P-8	Building Inspections for NFIP enforcement. The Anson County Building Inspection Department will administer the Flood Prevention Ordinance for Anson County and the Towns of Lilesville, Peachland, and Wadesboro. This will deter future property losses from natural hazards.	Flood	High	County Building Inspections, Town Staff	Unknown	Local; State; Federal	2023-2028.	Floodplain development permits are issued and inspections are performed by the Anson County Building Inspections and Permitting Department. This was performed on a routine basis as needed over the past five year period.
P-9	Building Inspections for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property.	All	High	County Building Inspections	Unknown	Local; State; Federal	2023-2028	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	Plan for Damaged Structures:							
	Overall damage assessment/data collection (visual inspection from roadways).							
	2. Data compiled and geographical areas assigned to teams.							
	3. Second detailed assessment by area teams							
	4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation							
	5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered.							
	6. Structure inspected for certificate of compliance.							
	Policy and procedures related to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime							
	to expedite utility reconnections.							
P-10	Investigate "green" buildings and design options.	Drought; Heat	Low	County Planning and Zoning; County Building Inspections	Unknown	Local; State	2023-2028.	The County is looking into ways to improve the design of future buildings

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-11	Develop a policy to minimize public services to proposed new structures that will be located in 100- year floodplain areas.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.
P-12	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this since the previous plan.
P-13	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this since the previous plan.
				Property Protection	1			
PP-1	Explore funding sources and encourage conservation groups to work with land owners to dedicate environmentally sensitive areas for open space.	All	High	County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2023-2028	The list will continue to be monitored.
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	The County continues to work to identify opportunities to implement this action.
				Emergency Services	5			
ES-3	Establish program to maintain continuity of government operations.	All	High	County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-4	Identify alternate Emergency Operations Center locations.	All	High	County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan and this information will be included.
ES-5	Identify alternate routes from major arteries in the County.	All	High	County Emergency Services	Unknown	Local; State; Federal	2023-2028.	The County continues to work with DOT to fund alternative routes.
				Public Education and Awa	reness			
PEA-1	Maintain and display a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding	Flood	High	Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.
PEA-3	Make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this since the previous plan. The County is working to identify the best ways to implement this action.

Town of Ansonville Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Support County update of the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Support restriction of inappropriate districts and uses in environmentally sensitive areas.	Flood	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.
P-2	Support County Planning creation an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, and federal and state freshwater wetlands.	Flood	Moderate	Town staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
P-3	Support County investigation in developing an effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this action since the previous update.
P-4	Support County creation of regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and perennial waterways located throughout the county.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Support County investigation of the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-6	Support County development of highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this action since the previous update.
P-7	ACTON REWORDED IN 2022: The Town of Ansonville will continue to reassess participation in the NFIP.	Flood	High	Town Staff	Unknown	Local; State; Federal	2023-2028.	At this time the elected officials are reviewing and taking the recommendation under advisement and will render a decision as their priorities will allow
P-8	Continue to support County Building Inspections procedures for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical	All	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2011- 2023.	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	areas assigned to teams.							
	Second detailed assessment by area teams							
	4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation							
	5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered.							
	6. Structure inspected for certificate of compliance.							
	Policy and procedures related to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.							
P-9	Support County investigation of "green" buildings and design options.	Drought; Heat	Low	Town Staff, County Planning and Zoning; County Building Inspections	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-10	Support County development of a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
P-11	Support the County update of the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Town Staff County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
P-12	Support the County's review and potential revision of the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update			
	Property Protection										
PP-1	Support County exploration for funding sources and encourage conservation groups to work with land owners to dedicate environmentally sensitive areas for open space.	All	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this action since the previous update.			
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2007-2023.	The list will continue to be monitored.			
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Town Staff	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this action since the previous update. The Town continues to seek opportunities to implement this action.			
		<u>'</u>		Emergency Services							
ES-3	Support County establishment of program to maintain continuity of government operations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan.			
ES-4	Support County identification of alternate Emergency Operations Center locations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan. This information will be included,			
ES-5	Support County identification of alternate routes from major arteries in the County.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028.	No progress has been made on this action since the previous update. The			

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
								County and Towns continue working with DOT to fund alternative routes.
			Publ	lic Education and Awaren	ess			
PEA-1	Support County maintenance and display of a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	Town Staff, County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding.	Flood	High	Town Staff, Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.
PEA-3	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	Town Staff, County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this action since the previous update. The Town continues to work towards implementing this action.

Town of Lilesville Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Support County update of the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Support restriction of inappropriate districts and uses in environmentally sensitive areas.	Flood	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.
P-2	Support County Planning creation an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, and federal and state freshwater wetlands.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
P-3	Support County investigation in developing an effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this action since the previous update.
P-4	Support County creation of regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and perennial waterways located throughout the county.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Support County investigation of the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-6	Support County development of highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this action since the previous update.
P-7	Support County Building Inspections for NFIP enforcement. The Anson County Building Inspection Department will continue to administer the Flood Prevention Ordinance for Town of Lilesville. The Town will continue to support this effort. This will deter future property losses from hazards.	Flood	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2023-2028.	Floodplain development permits are issued and inspections are performed by the Anson County Building Inspections and Permitting Department. This was performed on a routine basis as needed over the past five-year period.
P-8	Continue to support County Building Inspections procedures for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures: 1. Overall damage assessment/data collection (visual inspection from roadways).	All	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2011- 2023.	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	2. Data compiled and geographical areas assigned to teams.							
	3. Second detailed assessment by area teams							
	4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation							
	5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered.							
	6. Structure inspected for certificate of compliance.							
	Policy and procedures related to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.							
P-9	Support County investigation of "green" buildings and design options.	Drought; Heat	Low	Town Staff, County Planning and Zoning; County Building Inspections	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-10	Support County development of a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-11	Support the County update of the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Town Staff County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
P-12	Support the County's review and potential revision of the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
				Property Protection				
PP-1	Support County exploration for funding sources and encourage conservation groups to work with land owners to dedicate environmentally sensitive areas for open space.	All	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this action since the previous update.
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2007-2023.	The list will continue to be monitored.
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Town Staff	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this action since the previous update.
				Emergency Services				
ES-3	Support County establishment of program to maintain continuity of government operations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
ES-4	Support County identification of alternate Emergency Operations Center locations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan. This information will be included,		
ES-5	Support County identification of alternate routes from major arteries in the County.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028.	No progress has been made on this action since the previous update. The County and Towns continue working with DOT to fund alternative routes.		
Public Education and Awareness										
PEA-1	Support County maintenance and display of a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	Town Staff, County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.		
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding.	Flood	High	Town Staff, Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.		
PEA-3	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	Town Staff, County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this action since the previous update. The Town continues to work towards implementing this action.		

Town of McFarlan Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Support County update of the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Support restriction of inappropriate districts and uses in environmentally sensitive areas.	Flood	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.
P-2	Support County Planning creation an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, and federal and state freshwater wetlands.	Flood	Moderate	Town staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
P-3	Support County investigation in developing an effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this action since the previous update.
P-4	Support County creation of regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and perennial waterways located throughout the county.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Support County investigation of the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-6	Support County development of highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this action since the previous update.
P-7	DESCRIPTION REVISED IN 2018. The Town of McFarlan will continue to reassess participation in the NFIP as new flood maps become available.	Flood	High	County Building Inspections, Town of McFarlan	Unknown	Local; State; Federal	2023-2028.	At this time the elected officials are reviewing and taking the recommendation under advisement and will render a decision as their priorities will allow.
P-8	Continue to support County Building Inspections procedures for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures: 1. Overall damage assessment/data collection (visual inspection from roadways).	All	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2011- 2023.	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	Data compiled and geographical areas assigned to teams.							
	Second detailed assessment by area teams							
	4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation							
	5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered.							
	6. Structure inspected for certificate of compliance.							
	Policy and procedures related to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.							
P-9	Support County investigation of "green" buildings and design options.	Drought; Heat	Low	Town Staff, County Planning and Zoning; County Building Inspections	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-10	Support County development of a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
P-11	Support the County update of the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Town Staff County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update			
P-12	Support the County's review and potential revision of the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update			
	Property Protection										
PP-1	Support County exploration for funding sources and encourage conservation groups to work with land owners to dedicate environmentally sensitive areas for open space.	All	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this action since the previous update.			
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2007-2023.	The list will continue to be monitored.			
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Town Staff	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this action since the previous update. The Town continues to seek opportunities to implement this action.			
				Emergency Services							
ES-3	Support County establishment of program to maintain continuity of government operations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-4	Support County identification of alternate Emergency Operations Center locations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan. This information will be included,
ES-5	Support County identification of alternate routes from major arteries in the County.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028.	No progress has been made on this action since the previous update. The County and Towns continue working with DOT to fund alternative routes.
			Public	Education and Awarene	ss			
PEA-1	Support County maintenance and display of a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	Town Staff, County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification, On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding.	Flood	High	Town Staff, Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.
PEA-3	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	Town Staff, County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this action since the previous update. The Town continues to work towards implementing this action.

Town of Morven Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)				
Prevention												
P-1	Support County update of the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Support restriction of inappropriate districts and uses in environmentally sensitive areas.	Flood	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.				
P-2	Support County Planning creation an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, and federal and state freshwater wetlands.	Flood	Moderate	Town staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.				
P-3	Support County investigation in developing an effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this action since the previous update.				
P-4	Support County creation of regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and perennial waterways located throughout the county.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.				

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Support County investigation of the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-6	Support County development of highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this action since the previous update.
P-7	DESCRIPTION REVISED 2018. The Town of Morven has been in contact with the NC NFIP Outreach Coordinator Regarding participation in the NFIP.	Flood	High	County Building Inspections, Town of Morven	Unknown	Local; State; Federal	2023-2028.	At this time the elected officials are reviewing and taking the recommendation under advisement and will render a decision as their priorities will allow.
P-8	Continue to support County Building Inspections procedures for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures: 1. Overall damage assessment/data collection	All	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2011- 2023.	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	(visual inspection from roadways).							
	Data compiled and geographical areas assigned to teams.							
	3. Second detailed assessment by area teams							
	4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation							
	5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered.							
	6. Structure inspected for certificate of compliance.							
	Policy and procedures related to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility							
P-9	reconnections. Support County investigation of "green" buildings and design options.	Drought; Heat	Low	Town Staff, County Planning and Zoning;	Unknown	Local; State	2023-2028.	No progress has been made on this action

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				County Building Inspections				since the previous update.
P-10	Support County development of a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
P-11	Support the County update of the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Town Staff County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
P-12	Support the County's review and potential revision of the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
				Property Protection	1			
PP-1	Support County exploration for funding sources and encourage conservation groups to work with land owners to dedicate environmentally sensitive areas for open space.	All	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this action since the previous update.
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2007-2023.	The list will continue to be monitored.

Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Town Staff	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this action since the previous update. The Town continues to seek opportunities to implement this action.
			Emergency Services	5			
Support County establishment of program to maintain continuity of government operations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan.
Support County identification of alternate Emergency Operations Center locations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan. This information will be included,
Support County identification of alternate routes from major arteries in the County.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028.	No progress has been made on this action since the previous update. The County and Towns continue working with DOT to fund alternative routes.
	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property. Support County establishment of program to maintain continuity of government operations. Support County identification of alternate Emergency Operations Center locations. Support County identification of alternate routes from	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property. Support County establishment of program to maintain continuity of government operations. Support County identification of alternate Emergency Operations Center locations. Support County identification of alternate routes from major arteries in the County.	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property. Support County establishment of program to maintain continuity of government operations. Support County identification of alternate Emergency Operations Center locations. Support County identification of alternate routes from major arteries in the County.	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property. Support County establishment of program to maintain continuity of government operations. Support County identification of alternate Emergency Operations Center locations. Support County identification of alternate routes from major arteries in the County. All High Town Staff, County Emergency Services Town Staff, County Emergency Services Town Staff, County Emergency Services	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property. Support County establishment of program to maintain continuity of government operations. Support County identification of alternate Emergency Operations Center locations. Support County identification of alternate Emergency Operations Center locations. Support County identification of alternate routes from major arteries in the County. All High Town Staff, County Unknown Unknown Emergency Services	Description Assessed Assessed Priority Agency/Department Cost Funding Sources Federal Add State Grants, Local Grants Grants Grants Grants Grants Grants Grants Grants	Description Assessed Relative Agency/Department Cost Funding Sources Schedule

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PEA-1	Support County maintenance and display of a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	Town Staff, County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding.	Flood	High	Town Staff, Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.
PEA-3	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	Town Staff, County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this action since the previous update. The Town continues to work towards implementing this action.

Town Peachland Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Support County update of the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Support restriction of inappropriate districts and uses in environmentally sensitive areas.	Flood	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.
P-2	Support County Planning creation an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, and federal and state freshwater wetlands.	Flood	Moderate	Town staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
P-3	Support County investigation in developing an effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this action since the previous update.
P-4	Support County creation of regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and perennial waterways located throughout the county.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Support County investigation of the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-6	Support County development of highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this action since the previous update.
P-7	Support County Building Inspections for NFIP enforcement. The Anson County Building Inspection Department will continue to administer the Flood Damage Prevention Ordinance for City of Peachland. The Town will continue to support this effort. This will deter future property losses from hazards.	Flood	High	Town Staff County Building Inspections	Unknown	Local; State; Federal	2023-2028.	Floodplain development permits are issued and inspections are performed by the Anson County Building Inspections and Permitting Department. This was performed on a routine basis as needed over the past five-year period.
P-8	Continue to support County Building Inspections procedures for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures:	All	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2011- 2023.	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	Overall damage assessment/data collection (visual inspection from roadways).							
	Data compiled and geographical areas assigned to teams.							
	Second detailed assessment by area teams							
	4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation							
	5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered.							
	6. Structure inspected for certificate of compliance.							
	Policy and procedures related to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.							
P-9	Support County investigation of "green" buildings and design options.	Drought; Heat	Low	Town Staff, County Planning and Zoning; County Building Inspections	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-10	Support County development of a policy to minimize public	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
	services to proposed new structures that will be located in 100-year floodplain areas.							action since the previous update		
P-11	Support the County update of the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Town Staff County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update		
P-12	Support the County's review and potential revision of the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update		
				Property Protection						
PP-1	Support County exploration for funding sources and encourage conservation groups to work with land owners to dedicate environmentally sensitive areas for open space.	All	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this action since the previous update.		
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2007-2023.	The list will continue to be monitored.		
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Town Staff	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this action since the previous update. The Town continues to seek opportunities to implement this action.		
	Emergency Services									

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-3	Support County establishment of program to maintain continuity of government operations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan.
ES-4	Support County identification of alternate Emergency Operations Center locations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan. This information will be included,
ES-5	Support County identification of alternate routes from major arteries in the County.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028.	No progress has been made on this action since the previous update. The County and Towns continue working with DOT to fund alternative routes.
			Publi	c Education and Awarene	ss	•		
PEA-1	Support County maintenance and display of a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	Town Staff, County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding.	Flood	High	Town Staff, Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.
PEA-3	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	Town Staff, County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this action since the previous update. The Town

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
								continues to work towards implementing this action.

Town of Polkton Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Support County update of the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Support restriction of inappropriate districts and uses in environmentally sensitive areas.	Flood	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.
P-2	Support County Planning creation an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, and federal and state freshwater wetlands.	Flood	Moderate	Town staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
P-3	Support County investigation in developing an effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-4	Support County creation of regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and perennial waterways located throughout the county.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-5	Support County investigation of the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-6	Support County development of highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this action since the previous update.
P-7	Support County Building Inspections for NFIP enforcement. The Anson County Building Inspection Department will continue to administer the Flood Damage Prevention Ordinance for Town of Polkton. The Town will continue to support this	Flood	High	County Building Inspections	Unknown	Local; State; Federal	2023-2028.	Floodplain development permits are issued and inspections are performed by the Anson County Building Inspections and Permitting Department. This was performed on a routine basis as

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	effort. This will deter future property losses from hazards.							needed over the past five-year period.
P-8	Continue to support County Building Inspections procedures for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams 4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation	All	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2011- 2023.	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered.							
	6. Structure inspected for certificate of compliance.							
	Policy and procedures related to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.							
P-9	Support County investigation of "green" buildings and design options.	Drought; Heat	Low	Town Staff, County Planning and Zoning; County Building Inspections	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-10	Support County development of a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-11	Support the County update of the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Town Staff County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
P-12	Support the County's review and potential revision of the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
				Property Protection				
PP-1	Support County exploration for funding sources and encourage conservation groups to work with land owners to dedicate environmentally sensitive areas for open space.	All	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this action since the previous update.
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2007-2023.	The list will continue to be monitored.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Town Staff	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this action since the previous update. The Town continues to seek opportunities to implement this action.
				Emergency Services				
ES-3	Support County establishment of program to maintain continuity of government operations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan.
ES-4	Support County identification of alternate Emergency Operations Center locations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan. This information will be included,
ES-5	Support County identification of alternate routes from major arteries in the County.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028.	No progress has been made on this action since the previous update. The County and Towns continue working with DOT to

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
								fund alternative routes.			
	Public Education and Awareness										
PEA-1	Support County maintenance and display of a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	Town Staff, County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.			
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification, On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding.	Flood	High	Town Staff, Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.			
PEA-3	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	Town Staff, County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this action since the previous update. The Town continues to work towards implementing this action.			

Town of Wadesboro Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Support County update of the zoning district and permitted uses section of the zoning ordinance to identify appropriate districts and uses. Support restriction of inappropriate districts and uses in environmentally sensitive areas.	Flood	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made in the last five years. Continue to await county zoning.
P-2	Support County Planning creation an Environmental Protection Overlay District that permits floating overlay zones and identifies specific areas in need of special protection for flood hazard areas, watershed protection areas, and federal and state freshwater wetlands.	Flood	Moderate	Town staff, County Planning and Zoning	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
P-3	Support County investigation in developing an effective watershed protection, stormwater, soil erosion, and sediment control plans for commercial developments and major residential housing development projects.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028	No progress has been made on this action since the previous update.
P-4	Support County creation of regulations that protect existing forested areas especially in areas buffering and maintaining the integrity of seasonal, intermittent, and	All	Moderate	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	perennial waterways located throughout the county.							
P-5	Support County investigation of the feasibility of developing a "Future Open Space & Parks" Map and Ordinance that supports the dedication of floodplains and other environmentally significant areas.	All	Low	Town Staff, County Planning and Zoning	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-6	Support County development of highway corridor plans for Highways US 74, US 52, NC 109, and NC 218 to regulate development and provide emergency evacuation routes.	All	Moderate	Town Staff, County Planning and Zoning	Unknown	State; Federal	2023-2028.	No progress has been made on this action since the previous update.
P-7	Support County Building Inspections for NFIP enforcement. The Anson County Building Inspection Department will continue to administer the Flood Damage Prevention Ordinance for Town of Wadesville. The Town will continue to support this effort. This will deter future property losses from hazards.	Flood	High	County Building Inspections	Unknown	Local; State; Federal	2023-2028.	Floodplain development permits are issued and inspections are performed by the Anson County Building Inspections and Permitting Department. This was performed on a routine basis as needed over the past five-year period.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-8	Continue to support County Building Inspections procedures for Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health or other property. Plan for Damaged Structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams 4. Portions of walls, floors, ceilings, etc. that have been opened for evaluation 5. All construction that is repaired, replaced, dried, or sealed will be inspected before covered. 6. Structure inspected for certificate of compliance. Policy and procedures related	All	High	Town Staff, County Building Inspections	Unknown	Local; State; Federal	2011- 2023.	This action reflects a mitigation capability of Anson County. It will be removed from future plan updates.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	to storm damage and disconnected utility services: 1) inform public via television, radio and newspaper of the necessary steps to have utilities restored, 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.							
P-9	Support County investigation of "green" buildings and design options.	Drought; Heat	Low	Town Staff, County Planning and Zoning; County Building Inspections	Unknown	Local; State	2023-2028.	No progress has been made on this action since the previous update.
P-10	Support County development of a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
P-11	Support the County update of the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Town Staff County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
P-12	Support the County's review and potential revision of the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2023-2028.	No progress has been made on this action since the previous update
				Property Protection	1			
PP-1	Support County exploration for funding sources and encourage conservation groups to work with land owners to dedicate	All	High	Town Staff, County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this action since the previous update.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	environmentally sensitive areas for open space.							
PP-2	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	Town Staff, County Planning and Zoning	Unknown	Staff time only	2007-2023.	The list will continue to be monitored.
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Town Staff	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this action since the previous update. The Town continues to seek opportunities to implement this action.
				Emergency Service	s			
ES-3	Support County establishment of program to maintain continuity of government operations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan.
ES-4	Support County identification of alternate Emergency Operations Center locations.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028	The County is working to develop a COOP plan. This information will be included,
ES-5	Support County identification of alternate routes from major arteries in the County.	All	High	Town Staff, County Emergency Services	Unknown	Local; State; Federal	2023-2028.	No progress has been made on this action since the previous

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
								update. The County and Towns continue working with DOT to fund alternative routes.
			ı	Public Education and Awa	reness			
PEA-1	Support County maintenance and display of a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	Town Staff, County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this action since the previous update.
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding.	Flood	High	Town Staff, Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.
PEA-3	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	Town Staff, County Emergency Management	Unknown	Local	1-5 years	No progress has been made on this action since the previous update. The Town continues to work towards implementing this action.

Montgomery County Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-4	Update the flood prevention ordinance to the latest model ordinance.	Flood	Moderate	County Manager	Unknown	Local	2023-2028	Meeting is being held next month to try to update to latest model.			
P-7	Develop procedure for recording damage assessment information such as type of hazard, location of hazard occurrence, when it occurred, death or injury, property damaged, for use in hazard mitigation and land use planning.	All	Moderate	County 911 Director	Unknown	Local	2023-2028	Deferred to 2023-2028 plan update due to funding sources			
P-9	Review and evaluate snow and ice removal plans for each city/county. Evaluate and determine priority routes.	Winter Storm	Moderate	County Public Works	Unknown	Local	Deferred to 2023- 2028 plan update.	DOT takes care of all state maintained roads and highways with the towns taking care of all town streets.			
	Property Protection										
PP-2	Evaluate current capacity of critical services to deal with power outages.	Winter Storm; Wind	Moderate	County EMS Director; County Manager; County Fire Chief	Unknown	Local	2023-2028.	Deferred to 2023-2028 plan update due to funding sources.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PP-3	Look into funding for transfer switches.	Winter Storm; Wind	Moderate	County Manager; County Fire Chief	Unknown	Federal funding; Homeland Security	Deferred to 2023- 2028 plan update.	Have transfer switches, waiting to get them installed.
PP-4	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Services				
ES-4	Establish program to maintain continuity of government operations.	All	High	County Emergency Services	Unknown	Local; State; Federal	2023-2028	Working on COOP plan
ES-5	As part of annual budgeting process, procure generators: 1 generator for Page Street shelter; look for funding for 4 additional generators for shelters and fire departments.	Winter Storm; Wind	Moderate	County Finance Director; County Manager; County EMS Director	Unknown	Local; Outside source	2023-2028	Have generator for Page St. and West Mont. High. Still looking for funding for East Mont. High.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-7	Identify and designate at least one emergency shelter in each municipality.	All	Moderate	County and Town Managers; County EMS Director	Unknown	Local	2023-2028.	Still trying to find appropriate facility to house shelters.
		<u>'</u>		Public Education and Awa	reness			
PEA-1	Educate and inform local government and elected officials (decision makers) of the need to consider hazard mitigation in policy and budgetary planning and decision making processes.	All	Moderate	County Manager; County 911 Director; County EMS Director	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
PEA-2	Make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management	Unknown	Local	2018.	This will be put on county website once completed.

Town of Biscoe Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-1	Adopt a flood prevention ordinance to latest model ordinance.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-2	Consider partnering with municipalities to consolidate planning services.	All	Moderate	Town Manager	Unknown	Local; County funding	2023-2028.	No progress has been made on this since the previous plan.			
P-3	Become an NFIP member.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-4	Review and evaluate snow and ice removal plans for each city/county. Evaluate and determine priority routes.	Winter Storm	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-5	Develop program to clear debris from culverts and storm drains in urbanized areas.	Flood	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-6	Develop a water conservation voluntary and mandatory program for drought conditions.	Drought	Moderate	Town Public Works Director	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-7	Through subdivision regulations, encourage that power, cable and telephone lines be buried.	All	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
		<u> </u>		Property Protection	1			
PP-1	Evaluate current capacity of critical services to deal with power outages.	Winter Storm; Wind	Moderate	County EMS Director; County Manager; Town Fire Chief	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Services				
ES-1	Identify and designate at least one emergency shelter in Biscoe.	All	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-2	Put in place a countywide 911 reverse call system for location specific warning to public of impending disaster.	All	Moderate	County 911 Director	Unknown	Federal funding; Homeland Security funds	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-5	Develop emergency water supply capability.	All	Moderate	Town Public Works Director; County Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
			F	Public Education and Awa	reness			
PEA-1	Maintain and display a zoning map demonstrating zoning, overlay districts, and high hazard areas.	All	High	County Planning and Zoning; County GIS	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PEA-2	Work with the Brown Creek Soil Representative who has received training on erosion and sedimentation control methods and on floodplain surveying certification, On an annual basis, this person visits sites to assist property owners and developers with problems associated with drainage, erosion, and flooding	Flood	High	Brown Creek Soil	Unknown	Local; State	2023-2028	Brown Creek Soil has representatives with the proper training and experience to visit on an annual basis for evaluations.

Town of Candor Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-1	Adopt a flood prevention ordinance to latest model ordinance.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-2	Consider partnering with municipalities to consolidate planning services.	All	Moderate	Town Manager	Unknown	Local; County funding	2023-2028.	No progress has been made on this since the previous plan.			
P-3	Become an NFIP member.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-4	Review and evaluate snow and ice removal plans for each city/county. Evaluate and determine priority routes.	Winter Storm	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-5	Develop program to clear debris from culverts and storm drains in urbanized areas.	Flood	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-6	Develop a water conservation voluntary and mandatory program for drought conditions.	Drought	Moderate	Town Public Works Director	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
P-7	Through subdivision regulations, encourage that power, cable and telephone lines be buried.	All	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
	Property Protection										
PP-1	Evaluate current capacity of critical services to deal with power outages.	Winter Storm; Wind	Moderate	County EMS Director; County Manager; Town Fire Chief	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.			
				Emergency Services							
ES-1	Identify and designate at least one emergency shelter in Candor.	All	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
ES-2	Put in place a countywide 911 reverse call system for location specific warning to public of impending disaster.	All	Moderate	County 911 Director	Unknown	Federal funding; Homeland Security funds	2023-2028	No progress has been made on this since the previous plan.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
ES-3	Develop emergency water supply capability.	All	Moderate	Town Public Works Director; County Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
	Public Education and Awareness									
PEA-1	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management, Town of Candor	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		

Town of Mount Gilead Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-1	Adopt a flood prevention ordinance to latest model ordinance.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-2	Consider partnering with municipalities to consolidate planning services.	All	Moderate	Town Manager	Unknown	Local; County funding	2023-2028.	No progress has been made on this since the previous plan.			
P-3	Become an NFIP member.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-4	Review and evaluate snow and ice removal plans for each city/county. Evaluate and determine priority routes.	Winter Storm	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-5	Develop program to clear debris from culverts and storm drains in urbanized areas.	Flood	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-6	Develop a water conservation voluntary and mandatory program for drought conditions.	Drought	Moderate	Town Public Works Director	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-7	Through subdivision regulations, encourage that power, cable and telephone lines be buried.	All	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Protection]			
PP-1	Evaluate current capacity of critical services to deal with power outages.	Winter Storm; Wind	Moderate	County EMS Director; County Manager; Town Fire Chief	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
PP-2	As part of annual budget process, procure generators. Priority need for generator at wastewater treatment plant.	Winter Storm; Wind	Moderate	Town Administrator; Town Wastewater Treatment Plant Supervisor	Unknown	Local	6 months-5 years	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Services				
ES-1	Identify and designate at least one emergency shelter in Mount Gilead.	All	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-2	Put in place a countywide 911 reverse call system for location specific warning to public of impending disaster.	All	Moderate	County 911 Director	Unknown	Federal funding; Homeland Security funds	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
ES-3	Develop emergency water supply capability.	All	Moderate	Town Public Works Director; County Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
	Public Education and Awareness									
PEA-1	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management, Town of Candor	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		

Town of Star Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-1	Adopt a flood prevention ordinance to latest model ordinance.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-2	Consider partnering with municipalities to consolidate planning services.	All	Moderate	Town Manager	Unknown	Local; County funding	2023-2028.	No progress has been made on this since the previous plan.			
P-3	Become an NFIP member.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-4	Review and evaluate snow and ice removal plans for each city/county. Evaluate and determine priority routes.	Winter Storm	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-5	Develop program to clear debris from culverts and storm drains in urbanized areas.	Flood	Moderate	Town Public Works	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-6	Develop a water conservation voluntary and mandatory program for drought conditions.	Drought	Moderate	Town Public Works Director	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			
P-7	Through subdivision regulations, encourage that power, cable and telephone lines be buried.	All	Moderate	Town Manager	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Protection	1			
PP-1	Evaluate current capacity of critical services to deal with power outages.	Winter Storm; Wind	Moderate	County EMS Director; County Manager; Town Fire Chief	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
PP-2	As part of annual budget process, procure generators. Priority need for generator at wastewater treatment plant.	Winter Storm; Wind	Moderate	Town Administrator; Town Wastewater Treatment Plant Supervisor	Unknown	Local	6 months-5 years	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Services				
ES-1	Identify and designate at least one emergency shelter in Star.	All	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-2	Put in place a countywide 911 reverse call system for location specific warning to public of impending disaster.	All	Moderate	County 911 Director	Unknown	Federal funding; Homeland Security funds	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
ES-3	Develop emergency water supply capability.	All	Moderate	Town Public Works Director; County Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
	Public Education and Awareness									
PEA-1	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management, Town of Candor	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		

Town of Troy Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-1	Annually review the emergency response plan for the Town.	All	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-2	Adopt a flood prevention ordinance to latest model ordinance.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-3	Become an NFIP member.	Flood	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-4	Develop a comprehensive land use plan.	All	Moderate	Town Planning Department	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-5	Look into upgrading mapping system to GIS capability.	All	Moderate	Town Planner; Town Finance Officer	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-6	Review and evaluate snow and ice removal plans for each city/county. Evaluate and determine priority routes.	Winter Storm	Moderate	Town Public Works	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
P-7	Develop program to clear debris from culverts and storm drains in urbanized areas.	Flood	Moderate	Town Public Works	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
P-8	Develop a water conservation voluntary and mandatory program for drought conditions.	Drought	Moderate	Town Public Works Director	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
P-9	Through subdivision regulations, encourage that power, cable and telephone lines be buried.	All	Moderate	Town Planning Department	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
P-10	Designate preferred growth areas and develop areas plans for target locations.	All	Moderate	Town Planning Department	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
P-11	Through subdivision regulations, require street interconnectivity in all new subdivision to all multiple access points for emergency vehicles.	All	Moderate	Town Planning Department	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
P-12	Through subdivision regulations, consider additional vegetative buffer for large developments with extensive impervious surfaces.	All	Moderate	Town Planning Department	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
P-13	Consider amending subdivision ordinance to allow clustering to maximize density while preserving high hazard areas.	All	Moderate	Town Planning Department	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
	Property Protection									

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
PP-1	Evaluate current capacity of critical services to deal with power outages.	Winter Storm; Wind	Moderate	County EMS Director; County Manager; Town Fire Chief	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.		
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.		
		 		Natural Resource Prote	ction	 				
NRP-1	Through subdivision regulations, wherever possible preserve natural wetlands and designate conservation corridors.	All	Moderate	Town Planning Department	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
Emergency Services										
ES-1	Identify and designate at least one emergency shelter in Troy.	All	Moderate	Town Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.		
ES-2	Put in place a countywide 911 reverse call system for	All	Moderate	County 911 Director	Unknown	Federal funding; Homeland	2023-2028	No progress has been made on this since the previous plan.		

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	location specific warning to public of impending disaster.					Security funds					
ES-3	Develop emergency water supply capability.	All	Moderate	Town Public Works Director; County Manager	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
	Public Education and Awareness										
PEA-1	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management, Town of Candor	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
PEA-2	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management, Town of Troy	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			

Richmond County Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-1	Develop plan for alternate water storage and transportation methods for areas severely affected. Work with existing resources (i.e., fire departments, water departments, etc.) to develop "creative" water distribution.	Drought; Extreme Heat	Low	County Public Works Director	Unknown	State and Federal Programs	2023-2028	Leasing / Renting of Bulk Storage (tankers) will be utilized should the need arise to supply water to severely affected areas. Coordination and participation shall be performed with local fire departments to provide and address the needs of the citizens			
P-2	Reduce potential fuel loads. Evaluate and enforce building and zoning ordinances.	Wildfire	High	County Planning Director	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-3	Expand and improve existing water distribution systems. Identify conservation methods and establish Public Service Announcements accordingly.	Drought; Extreme Heat	Moderate	County Cooperative Extension Service Director	Unknown	Local; State; Federal; Possible private	2012- 2023.	Partner with Richmond Soil and Water and NRCS to promote conservation methods.			
P-4	Review plans for water conservation and distribution. Compare plans with changing needs of given locations.	Drought; Extreme Heat	Moderate	County Public Works Director	Unknown	Local	2023-2028	We continue to look for ways to improve on water conservation and improve our distribution system.			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Clear and maintain utility rights of way. Survey and clear right of ways of debris and growth.	Winter Storm	High	County Public Works Director	Unknown	Local; State; Federal; Utilities	2023-2028	Our water lines are almost completely located on the NCDOT ROW where there is minimal if any clearing to be done. Richmond County is prepared should the need arise to perform clearing for access to its utilities.
P-6	Clear and maintain ditches, canals, and streams. Wherever practical, encourage landowners to expand and maintain drain ways for maximum effect.	Severe Thunderstorm	High	County Public Works Director	Unknown	Local; State; Federal; Utilities	2023-2028	Richmond County maintains no roadways so most of this work is completed by state forces. Should there be a need for assistance, Richmond County will provide services as they are available
P-7	Reduce potential fuel loads. Remove debris.	Wildfire	High	County Fire Department	Unknown	Local; State	2023-2028.	No progress has been made on this since the previous plan.
P-8	Clear and maintain utility rights of ways. Whenever possible, encourage underground installation of utility lines.	Winter Storms	High	County Public Works Director	Unknown	Local; Utilities	2023-2028.	Clearing of ROW's shall be responsibility of Utility owner. Richmond County shall maintain access to all water and sewer lines operated by the County

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-9	Expand and improve existing water distribution systems. Establish funding for waterline expansion or well construction.	Drought; Extreme Heat	Moderate	County Community Resources Director	Unknown	Local; Federal	2023-2028.	Removed.
P-10	Clear and maintain ditches, canals, and streams. Wherever practical, encourage landowners to expand and maintain drain ways for maximum effect.	Severe Thunderstorm	High	County Public Works Director	Unknown	Local; State; Federal; Utilities	2-4 years	No progress has been made on this since the previous plan.
P-11	Reduce potential fuel loads. Remove debris.	Wildfire	High	County Fire Department	Unknown	Local; State	2-5 years	No progress has been made on this since the previous plan.
P-12	Reduce potential fuel loads. Introduce the National Firewise Program into Richmond County.	Wildfire	High	County Emergency Management Coordinator	Unknown	Local; State; Federal; Private	2-5 years	Unable to implement due to limited staffing. The County continues to work towards implementing this action.
P-14	Clear and maintain utility rights of ways. Whenever possible, encourage underground installation of utility lines.	Winter Storms	High	County Public Works Director	Unknown	Local; Utilities	2-5 years	No progress has been made on this since the previous plan.
P-16	Expand and improve existing water distribution systems. Establish funding for waterline expansion or well construction.	Drought; Extreme Heat	Moderate	Count Community resources Director Property Protection	Unknown	Local; Federal	3-10 years	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PP-1	Evaluate current capacity of critical services to deal with power outages.	Winter Storm; Wind	Moderate	County EMS Director; County Manager; Town Fire Chief	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
PP-2	Reduce potential fuel loads. Demolish and remove structures.	Wildfire	High	County Fire Marshal	Unknown	Local; State; Federal; Private	2023-2028	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
			1	Emergency Services				
ES-1	Increase the number of water points available for fire suppression. Install dry hydrants.	Wildfire	High	County Emergency Management Coordinator	Unknown	Local; State; Federal; Possibly private	2023-2028	No progress has been made on this since the previous plan.
ES-2	Increase the amount of relief available to the needy during times of extended high heat. Advertise to the public both	Drought; Extreme Heat	High	County Social Services	Unknown	Business; Local; State;	2012- 2023.	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	need for funds and the resource.					Federal; Private; Utilities		
ES-3	Minimize delay in fire/rescue and emergency services ability to respond during severe ice conditions. Secure and maintain supplemental equipment necessary for operations during severe ice conditions.	Winter Storm	High	County Fire/Rescue/ EMS	Unknown	Local; State; Federal	2012-2023.	As new trucks are ordered, they are equipped with devices to assist.
ES-4	Pre-supply emergency shelters. Pre-place supplies in secure containers.	Tornado	Low	County Red Cross Director	Unknown	Local; State; Federal; Private	2023-2028	No progress has been made on this since the previous plan.
ES-5	Increase the amount of relief available to the needy during times of extended heat. Distribute electric fans to those who do not have any means to cool their home.	Drought; Extreme Heat	High	County Social Services Director	Unknown	Local; State; Federal; Utilities	2012- 2023.	Water Maintenance fleet continues to replace 2 wheel drive with 4 wheel drive vehicles on an as needed basis
ES-6	Increase communications to the public, providing the most lead time possible, with regard to tornado watches and warnings. Install AWOS station in County.	Tornado	Moderate	County Emergency Management Coordinator	Unknown	Local; State; Federal	2023-2028	Working with Senators and Richmond County Government to establish plan
				Structural Projects				
S-1	Clear and maintain ditches, canals, and streams. Design alternate means of drainage when necessary.	Severe Thunderstorm	High	County Public Works Director	Unknown	Local; State; Federal; Utilities	2023-2028.	Richmond County shall assist as necessary. However, most of these items shall be performed by state forces
			Pul	blic Education and Aware	eness			

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PEA-1	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management, Town of Candor	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PEA-2	Coordinate with the County to make information about mitigation available to the public via the County website and social networking outlets.	All	Moderate	County Emergency Management, Town of Troy	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PEA-3	Increase public awareness of drinking water hazards during/after a flood. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Flood	Moderate	County Health Department Director	Unknown	Local; State; Federal	2023-2028.	Richmond County will continue to monitor water system expansion on an as needed basis. Public Education outreach is performed via Richmond County web page, monthly billing inserts, PSA's, etc.
PEA-4	Provide educational opportunities annually for hurricane awareness. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Hurricane	Moderate	County Emergency Management Director	Unknown	Local; State; Federal	2023-2028.	Partner with Richmond Soil and Water and NRCS to promote conservation methods.
PEA-5	Expand the public water system to vulnerable areas of the County. Educate the public.	Drought; Extreme Heat	Low	County Public Works Director	Unknown	Local; State; Federal; Possibly private	2023-2028 as needed.	Partner with USDA Rural Development in providing REAP applications to farms. (Rural Energy for America Program.) Promote

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
								energy efficiency and renewable energy to farms and businesses.

Town of Dobbins Heights Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Provide cell phones to key Town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	2023-2028	No progress has been made on this since the previous plan.
P-2	Provide two way radios to key Town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	2023-2028	No progress has been made on this since the previous plan.
P-3	Take the necessary steps to begin participation in the National Flood Insurance Program to ensure the availability of flood insurance for property owners.	Flood	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
				Property Protect	on			
PP-1	Continue to consider the relationship between proposed infrastructure locations and hazard prone areas in the capital improvement planning process. If reasonable and possible, public infrastructure will be placed outside of hazard prone areas.	Flood	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters							
	and other activities that reduces to the loss of life and property.							
				Emergency Service	ces			
ES-1	Monitor the Town's emergency infrastructure including but not limited to backup generators, communications equipment, and vehicles by maintaining a routine maintenance and testing schedule. This action will ensure equipment is functioning properly if needed during or in the aftermath of a disaster.	All	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
				Public Education and A	wareness			
PEA-1	Have brochures about different natural hazards available for the public at Town Hall and other public locations deemed possible.	All	Moderate	Town Mayor	Unknown	Hazard brochures are available from NCEM and from other agencies. Usually free of	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
						charge.		
PEA-2	Use the local cable access channel to disseminate information about advanced preparation which residents and businesses can perform that will assist in minimizing the effects and inconveniences associated with natural hazards.	All	Moderate	Town Mayor	Unknown	Local funds	2023-2028	No progress has been made on this since the previous plan.
PEA-3	Educate citizens about appropriate actions if they find themselves in the path of a tornado, preparing for a possible hurricane, or in a thunderstorm.	Tornado; Hurricane; Severe Thunderstorm	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
PEA-4	Coordinate with County EM to make information about mitigation available to the public via the County website, Town website and/or social networking outlets.	All	Moderate	County Emergency Management, Town of Dobbins Heights	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Town of Ellerbe Mitigation Action Plan

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention				
P-1	Provide cell phones to key Town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	2023-2028	No progress has been made on this since the previous plan.
P-2	Provide two way radios to key Town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	2023-2028	No progress has been made on this since the previous plan.
P-3	Take the necessary steps to begin participation in the National Flood Insurance Program to ensure the availability of flood insurance for property owners.	Flood	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
P-4	Provide proper maintenance and upkeep of public drainage systems. The periodic removal of sediment and debris from ditches, catch basins, and storm drains will assist in preventing localized flooding during natural hazards.	Flood	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
P-5	Take necessary steps to begin participation in the National Flood Insurance Program to ensure the availability of flood insurance for property owners.	Flood	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-6	Develop a water conservation plan that will establish Town policies for conserving water during periods of drought. Such plan must be established prior to the onset of a drought in order to expedite its implementation during a drought. Once the plan is developed, it can be implemented on an as-needed basis.	Drought	Moderate	Town Mayor	Unknown	Local, State, Federal	2023-2028	No progress has been made on this since the previous plan.
				Property Protection				
PP-1	Continue to consider the relationship between proposed infrastructure locations and hazard prone areas in the capital improvement planning process. If reasonable and possible, public infrastructure will be placed outside of hazard prone areas.	Flood	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	reduces to the loss of life and property.							
				Emergency Services				
ES-1	Monitor the Town's emergency infrastructure including but not limited to backup generators, communications equipment, and vehicles by maintaining a routine maintenance and testing schedule. This action will ensure equipment is functioning properly if needed during or in the aftermath of a disaster.	All	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
ES-2	Develop a comprehensive assessment of each department's emergency infrastructure and determine if current and future needs for emergency response in the aftermath of a disaster are met. Outdated and antiquated equipment will be repaired or replaced as funding allows, and additional equipment that is needed will be purchases as funding allows.	All	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.
				Structural Projects				

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
S-1	Continue to improve the existing stormwater management system to ensure new development and increased impervious surface areas do not overburden the existing system. Such improvements may include cleaning and piping open ditches, upsizing existing drainage system components, and installing curb and gutter to properly channel water into the drainage system.	Flood	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.
			Pu	blic Education and Awar	eness			
PEA-1	Have brochures about different natural hazards available for the public at Town Hall and other public locations deemed possible.	All	Moderate	Town Mayor	Unknown	Hazard brochures are available from NCEM and from other agencies. Usually free of charge.	2023-2028	No progress has been made on this since the previous plan.
PEA-2	Use the local cable access channel to disseminate information about advanced preparation which residents and businesses can perform that will assist in minimizing the effects and inconveniences associated with natural hazards.	All	Moderate	Town Mayor	Unknown	Local funds	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Assessed	Relative Priority	Lead Agency/Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PEA-3	Educate citizens about appropriate actions if they find themselves in the path of a tornado, preparing for a possible hurricane, or in a thunderstorm.	Tornado; Hurricane; Severe Thunderstorm	Moderate	Town Mayor	Unknown	Staff Time Only	2023-2028	No progress has been made on this since the previous plan.
PEA-4	Coordinate with County EM to make information about mitigation available to the public via the County website, Town website and/or social networking outlets.	All	Moderate	County Emergency Management, Town of Dobbins Heights	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

City of Hamlet Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
		Audresseu	Priority	Prevention	<u> </u>	Fulluling Sources	Schedule	Status (2022)
P-3	Continue to enforced flood management which limits and sets standards for developments in flood hazard zones.	Flood	Moderate	City Mayor	Unknown	Staff time only	2023-2028.	Preparation made via ordinance implementation.
P-4	Provide proper maintenance and upkeep of public drainage systems. The periodic removal of sediment and debris from ditches, catch basins, and storm drains will assist in preventing localized flooding during natural hazards.	Flood	Moderate	City Mayor	Unknown	Staff time only	2023-2028.	Public Works continues to monitor, drain, and upkeep drainage systems on a regular basis.
P-5	Continue to participate in the National Flood Insurance Program to ensure the availability of flood insurance for property owners.	Flood	Moderate	City Mayor	Unknown	Staff time only	2023-2028.	The City continues to do all things necessary to meet all requirements for participating in the NFIP annually.
P-6	Develop a water conservation plan that will establish City policies for conserving water during periods of drought. Such plan much be established prior to the onset of a drought in order to expedite its implementation during a drought. Once the plan is developed, it can be implemented on an as-needed basis.	Drought	Moderate	City Mayor	Unknown	Local, State, Federal	2023-2028.	Preparation made via ordinance implementation.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Prot	ection			
PP-1	Continue to consider the relationship between proposed infrastructure locations and hazard prone areas in the capital improvement planning process. If reasonable and possible, public infrastructure will be place outside of hazard prone areas.	All	Moderate	City Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
	the loss of the and property.			Emergency Se	ervices			
ES-1	Monitor the status of the City's emergency infrastructure including but not limited to backup generators, communications equipment, and vehicles by maintaining a routine maintenance and testing schedule. This action will ensure equipment is functioning properly if needed during or in the aftermath of a disaster.	All	Moderate	City Mayor	Unknown	Staff time only	2023-2028.	Issue with regular monitoring and upkeep in place.

Action	Description	Hazard(s)	Relative	Lead Agency/	Estimated	Potential	Implementation	Implementation
#		Addressed	Priority	Department	Cost	Funding Sources	Schedule	Status (2022)
ES-2	Develop a comprehensive assessment of each department's emergency infrastructure and determine if current and future anticipated needs for emergency response in the aftermath of a disaster are met. Outdated and antiquated equipment will be repaired and replaced as funding allows, and additional equipment that is needed will be purchased as funding allows.	All	Moderate	City Mayor	Unknown	Staff time only	2023-2028.	Issue with regular monitoring of current equipment and the availability of funds for newer equipment.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
				Structural Pro							
S-1	Continue to improve the existing stormwater management system to ensure new development and increased impervious surface areas do not overburden the existing system. Such improvements may include cleaning and piping open ditches, upsizing existing drainage system components, and installing curb and gutter to properly channel water into the drainage system.	Flood	Moderate	City Mayor	Unknown	Staff time only	2023-2028.	Issue with regular maintenance, cleaning, and upkeep on stormwater drains throughout the City.			
	Public Education and Awareness										
PEA-1	Have brochures about different natural disaster available for the public at City Hall and other locations deemed possible.	All	Moderate	City Mayor	Unknown	Hazard brochures are available from NCEM and from other agencies. Usually free of charge.	2023-2028.	Future priority. Such a priority will be assessed and evaluated in the future.			
PEA-2	Use the local cable access channel to disseminate information about advanced preparation which residents and businesses can perform that will assist in minimizing the effects and inconveniences associated with natural hazards.	All	Moderate	City Mayor	Unknown	Local funds	2023-2028.	Future priority. Such a priority will be assessed and evaluated in the future.			
PEA-3	Educate citizens about appropriate actions if they find themselves in the path of a tornado, preparing for a hurricane, or in a thunderstorm.	Tornado; Hurricane; Severe Thunderstorm	Moderate	City Mayor	Unknown	Staff time only	2023-2028.	Future priority. Such a priority will be assessed and evaluated in the future.			
PEA-4	Coordinate with County EM to make information about mitigation available to the public via the County website, Town website and/or social networking outlets.	All	Moderate	County Emergency Management, City of Hamlet	Unknown	Local	2023-2028.	Future priority. Such a priority will be assessed and evaluated in the future.			

Town of Hoffman Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)		
				Prevention	on					
P-1	Provide cell phones to key Town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	Within 5 years	No progress has been made on this since the previous plan.		
P-2	Provide two way radios to key Town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	Within 5 years	No progress has been made on this since the previous plan.		
P-3	Take necessary steps to begin participation in the National Flood Insurance Program to ensure the availability of flood insurance for property owners.	Flood	Moderate	Town Mayor	Unknown	Staff time only	Within 5 years	No progress has been made on this since the previous plan.		
	Property Protection									
PP-1	Continue to ensure the relationship between proposed infrastructure locations and hazard prone areas in the capital improvement planning process. If reasonable and possible, public infrastructure will be placed outside of the hazard prone areas.	All	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.		
				Emergency Se	rvices					
ES-1	Monitor the Town's emergency infrastructure including but not limited to backup generators, communications equipment, and vehicles by maintaining a routine maintenance and testing schedule. This action will ensure equipment is functioning properly if needed during or in the aftermath of a disaster.	All	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.		

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
			Pu	blic Education an	d Awareness			
PEA-1	Have brochures about different natural disasters available for the public at Town Hall and other public locations deemed possible.	All	Moderate	Town Mayor	Unknown	Hazard brochures are available from NCEM and from other agencies. Usually free of charge.	2023-2028	No progress has been made on this since the previous plan.
PEA-2	Use the local cable access channel to disseminate information about advanced preparation which residents and businesses can perform that will assist in minimizing the effects and inconveniences associated with natural hazards.	All	Moderate	Town Mayor	Unknown	Local funds	2023-2028	No progress has been made on this since the previous plan.
PEA-3	Educate citizens about appropriate actions if they find themselves in the path of a tornado, preparing for a possible hurricane, or in a thunderstorm.	Tornado; Hurricane; Severe Thunderstorm	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.
PEA-4	Coordinate with County EM to make information about mitigation available to the public via the County website, Town website and/or social networking outlets.	All	Moderate	County Emergency Management, Town of Hoffman	Unknown	Local	1-5 Years	No progress has been made on this since the previous plan.

Town of Norman Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
				Prevention	on						
P-1	Provide cell phones to key town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	2023-2028	No progress has been made on this since the previous plan.			
P-2	Provide two way radios to key town personnel.	All	Moderate	Town Mayor	Unknown	Local, State, Federal	2023-2028	No progress has been made on this since the previous plan.			
P-3	Take the necessary steps to begin participation in the National Flood Insurance Program to ensure the availability of flood insurance for property owners.	Flood	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.			
	Property Protection										
PP-1	Continue to consider the relationship between proposed infrastructure locations and hazard prone areas in the capital improvement planning process. If reasonable and possible, public infrastructure will be placed outside of hazard prone areas.	Flood	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.			
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.			

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
	and other activities that reduces to the loss of life and property.							
				Emergency Se	ervices			
ES-1	Monitor the Town's emergency infrastructure including but not limited to backup generators, communications equipment, and vehicles by maintaining a routine maintenance and testing schedule. This action will ensure equipment is functioning properly if needed during or in the aftermath of a disaster.	All	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
			Pu	blic Education an	d Awareness			
PEA-1	Have brochures about different natural hazards available for the public at Town Hall and other public locations deemed possible.	All	Moderate	Town Mayor	Unknown	Hazard brochures are available from NCEM and from other agencies. Usually free of charge.	2023-2028	No progress has been made on this since the previous plan.
PEA-2	Use the local cable access channel to disseminate information about advanced preparation which residents and businesses can perform that will assist in minimizing the effects and inconveniences associated with natural hazards.	All	Moderate	Town Mayor	Unknown	Local funds	2023-2028	No progress has been made on this since the previous plan.
PEA-3	Educated citizens about appropriate actions if they find themselves in the path of a tornado, preparing for a possible hurricane, or in a thunderstorm.	Tornado; Hurricane; Severe Thunderstorm	Moderate	Town Mayor	Unknown	Staff time only	2023-2028	No progress has been made on this since the previous plan.
PEA-4	Coordinate with County EM to make information about mitigation available to the public via the County website, Town website and/or social networking outlets.	All	Moderate	County Emergency Management, Town of Norman	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

City of Rockingham Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention	n			
P-1	Continue to strictly enforce the North Carolina State Building Codes to ensure that all structures are constructed to be as resilient as possible to natural hazards.	All	High	City Inspections Department	Unknown	Internal funds	2023-2028	The City's Inspections Superintendent does this on a daily basis.
P-2	Continue to require the installation of underground utilities in new developments and continue to seek opportunities to bury existing overhead utilities.	All	Low	City Planning Department; City Planning and Zoning Board	Unknown	Internal funds; Various grants	2023-2028	This is a requirement in the approval process for subdivision and major land developments.
P-3	Continue to provide cellular phones to al key City personnel. Such phones will be crucial for communication in the aftermath of natural disaster if land lines are damaged.	All	High	All City Department Heads	Unknown	Internal funds	2023-2028	All critical City personnel are issued mobile phones.
P-4	Continue to provide two-way radios to all key City personnel. Such radios will be needed for emergency response in the aftermath of a disaster.	All	High	All City Department Heads	Unknown	Internal funds	2023-2028	All critical City personnel are issued two-way radios.
P-5	Continue to maintain the City's geographic information system (GIS) by providing modern computer hardware and routine updates of digital data sets. Such system is necessary to identify and map hazard areas, critical facilities, and public infrastructure.	All	High	City Planning Department	Unknown	Internal funds	2023-2028	The city maintains a GIS system with modern hardware and software. The data sets are updated regularly as needed to stay current.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-6	Purchase a global positioning system (GPS) to use in conjunction with the City's geographic information system (GIS). Such GPS will allow for the creation of more accurate data sets for the City's GIS.	All	Low	City Planning Department	Unknown	Internal funds	2023-2028	All key personnel have access to laptop computers.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-7	Place laptop computers in the vehicles of key City personnel to facilitate quicker access to data stored in the City's GIS.	All	Low	All City Department Heads	Unknown	Internal funds; Various grants	2023-2028	All key personnel have access to laptop computers.
P-8	Continue to strictly enforce flood management regulations which limit and set standards for development in flood hazard areas. Revisions to the City's existing flood management regulations will likely be needed in order to comply with new state and federal guidelines and deficiencies identified in the capability assessment.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	High	City Planning Department	Unknown	Internal funds	2023-2028	All development plans are viewed during the permitting process to ensure compliance with all applicable flood regulations.
P-9	Draft, adopt, and enforce stormwater management regulations to ensure future growth does not overburden existing drainage systems. The services of a professional consultant with expertise in stormwater management will likely be needed to assist City staff in drafting such regulations.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Low	City Planning Department; City Planning and Zoning Board; City Council	Unknown	Internal funds; Various grants	2023-2028	The political will does not yet exist to impose greater regulation on new developments in a community with a struggling local economy.
P-10	Continue to provide for proper maintenance and upkeep of public drainage systems. The periodic removal of sediment and debris from ditches, catch basins, and storm drains will assist in preventing localized flooding during natural hazards.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Moderate	City Street Department	Unknown	Internal funds	2023-2028	The City's Street department routinely clears catch basins and clean ditches to minimize local flooding.
P-11	Continue to participate in the National Flood Insurance Program to ensure the availability of flood insurance for property owners.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Moderate	City Planning Department	Unknown	Internal funds	2023-2028	The City meets all requirements for participating in the NFIP annually.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-12	Continue to encourage the use of cluster style development techniques and planned residential developments in and around hazard prone areas where residential development is proposed. The reservation of open space that is required as part of such development techniques can be employed to maintain permissible densities while minimizing hazard exposure.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Moderate	City Planning Department; City Planning and Zoning Board	Unknown	Internal funds	2023-2028	Since development has been relatively slow in Rockingham over the last 20 years, the pressure to develop hazard prone areas is not as great as it might be in other communities. The City has seen very few requests for development that involves hazard prone areas.
P-13	Remove beaver dams and other stream impediments along Hitchcock Creek and the north prongs of Falling Creek. The removal of such impediments will improve stream flow and reduce water backup which causes flooding.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Low	City Administration	Unknown	Internal funds; Various grants	2005- 2023.	The City continuously removes trees and log jams from these waterways.
P-14	Develop and maintain a water conservation plan that will establish City policies for conserving water during periods of drought. Such plan must be established prior to the onset of a drought in order to expedite its implementation during a drought. Once the plan is developed, it can be implemented on an as needed basis.	Drought; Extreme Heat	Moderate	City Administration; City Water Treatment Department	Unknown	Internal funds	2023-2028	The City water conservation plan is adopted and on file in City Hall. It can and will be implemented on an as needed basis.

P-15	Establish a City urban forestry program. The development of such program will facilitate tree planting that will increase the natural tree canopy and thereby provide a cooling effect during periods of extreme heat.	Drought; Extreme Heat	Low	City Planning Department; Planning and Zoning Board	Unknown	Internal funds	2023-2028	While no official urban forestry program has been established, the City has undertaken several projects to plant new street trees around the City.
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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
P-16	Continue to maintain an agreement with Richmond County to purchase additional water as needed.	Drought; Extreme Heat	Moderate	City Council; City Manager	Unknown	Internal Funds	Currently in effect; Continuous	The agreement is in place and in full effect.			
	Property Protection										
PP-1	Continue to consider the relationship between proposed infrastructure locations and hazard prone areas in the capital improvement planning process. If reasonable and possible, public infrastructure will be placed outside of hazard prone areas.	All	High	City Manager; City Planning Director; City Public Works Director	Unknown	Internal funds	2005- 2023.	The City did complete the relocation of the Pee Dee Pump Station as well as the School Pump Station out of the floodplain. The City is not planning to relocate the Hollybrook and Roberdel Pump Stations out of the floodplain.			
PP-2	Pursue acquisition of properties located in hazard prone areas that are best suited for use as passive recreation areas as funding permits, which are consistent with the City's plans for the development of greenways and walking trails.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Moderate	City Administration; City Council	Unknown	Internal funds; Various grants	2023-2028.	No funds were available in the last five-year period to purchase hazard prone properties.			
PP-3	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	The City continues to work to identify opportunities to implement this action.			

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	and other activities that reduces to the loss of life and property.										
	Natural Resource Protection										
NRP-1	Continue to utilize the Open Space zoning district in areas that are especially susceptible to natural hazards. Revisions to the boundaries of the Open Space zoning district along Hitchcock Creek, the north prong of Falling Creek, and the south prong of Falling Creek may be needed once state efforts to remap floodway and floodplain boundaries are completed.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Moderate	City Planning Department; City Planning and Zoning Board	Unknown	Internal funds	2023-2028	The City continues to utilize the Open Space zoning district as a means to significantly limit development in flood hazard areas.			

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
NRP-2	Establish conservation buffers along the banks of Hitchcock Creek and the north and south prongs of Falling Creek. The use of conservation buffers around such creeks will limit development in flood hazard areas.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Low	City Planning Department; City Planning and Zoning Board	Unknown	Internal funds	2023-2028	No funds were available to purchase additional conservation buffers in the last five-year period.
NRP-3	Continue to require the use of proper erosion and sedimentation control devices in conjunction with all land disturbing activities. Such requirements reduce the amount of sediment in the storm drainage system which in turn reduces flood potential.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Moderate	City Planning and Inspections Department	Unknown	Internal funds	2023-2028	The City's Code Enforcement Officer routinely reviews sedimentation and erosion control measure on his visits to construction job sites.
NRP-4	Draft, adopt, and enforce tree preservation regulations. The development of such regulations will assist in preserving the natural tree canopy and thereby provide a cooling effect during periods of extreme heat.	Drought; Extreme Heat	Low	City Planning Department; City Planning and Zoning Board; City Council	Unknown	Internal funds	2023-2028	The political will does not yet exist to impose greater regulation in a community with a struggling local economy.
				Emergency Se	rvices			
ES-1	Monitor the status of the City's emergency infrastructure including but not limited to backup generators, communications equipment, and vehicles by maintaining a routine maintenance and testing schedule. This action will ensure equipment is functioning properly if needed during or in the aftermath of a natural disaster.	All	High	All City Departments	Unknown	Internal funds	2012- 2023.	The City appropriates funds annually to replace critical equipment that would be needed during an emergency.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-2	Perform a comprehensive assessment of each department's emergency infrastructure and determine if current and future anticipated needs for emergency response in the aftermath of a disaster are met. Outdated and antiquated equipment will be repaired or replaced as funding allows, and additional equipment that is needed will be purchased as funding allows.	All	High	All City Departments	Unknown	Internal funds; Various grants	2012- 2023.	Each City Department Head is tasked with conducting an inventory of the department's equipment; reviewing anticipated needs; and requesting new and/or replacement equipment during the City's annual budgeting process. The City Council budgets funds annually to replace and update equipment.
ES-3	Implement early warning systems (i.e. stream gauges) on Hitchcock Creek to provide advance notice of flood events.	Flood	Moderate	All City Departments	Unknown	HMA Grant Program	2023-2028.	No funding yet allocated for this project
				Structural Pro	ojects			
S-1	Continue to improve the existing stormwater management system to ensure new development and increase impervious surface areas do not overburden the existing system. Such improvements may include cleaning and piping open ditches, upsizing existing drainage system components, and installing curb and gutter to property channel water into the drainage system.	Flood; Hurricane; Winter Storm; Severe Thunderstorm	Moderate	City Street Department	Unknown	Internal funds	2023-2028.	This type work by the City has been somewhat limited because of limited funding. City staff does routinely work to clean ditches and culverts in efforts to minimize flooding potential.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
			Pul	olic Education an	d Awareness			
PEA-1	Develop and print an information brochure regarding potential hazard locations and the requirements, limitations, or possible consequences for development in such areas. The brochure will also contain information about specific actions that citizens can take to better prepare themselves to deal with a natural disaster. Such brochure can be distributed by the Planning and Inspections Department in City Hall.	All	Moderate	City Planning Department	Unknown	Internal funds	2023-2028.	City staff periodically sends information via social media and the City website regarding upcoming hazard weather conditions
PEA-2	Continue to require the delineation of floodplain and floodway boundaries on all final subdivision plats with a reference notation regarding limitation for future development potential. Such notation will make potential buyer, developers, and realtors aware of the potential flood hazard for such property.	Flood	Low	City Planning Department	Unknown	Internal funds	2023-2028.	This is a requirement in the approval process for all subdivision plats.
PEA-3	Include information in the City's quarterly newsletter that is mailed to all City residents about potential hazards, hazard areas, mitigation measures in which citizens can engage, and the mitigation measures in which the City is engaged.	All	High	City Administration; City Planning Department	Unknown	Internal funds	2023-2028.	The Rockingham Fire Department periodically includes information on the local cable access channel regarding advanced storm preparation measures citizens and businesses.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PEA-4	Include information on the City's website about potential hazards, hazard areas, mitigation measures in which citizens can engage, and the mitigation measure in which the City is engaged.	All	High	City Planning Department	Unknown	Internal funds	2023-2028.	City staff periodically sends information via social media and the City website regarding upcoming hazard weather conditions

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PEA-5	Use the local cable access channel to disseminate information about advanced preparations, which residents and businesses can perform that will assist in minimizing the effects and inconveniences associated with natural hazards.	All	Low	City Planning Department	Unknown	Internal funds	2023-2028.	City staff periodically sends information via social media and the City website regarding upcoming hazard weather conditions
PEA-6	Educate citizens about appropriate actions if they find themselves in the path of a tornado.	Tornado		City Planning Department	Unknown	Internal funds	Currently in effect; Continuous	No progress has been made on this since the previous plan.
PEA-7	Make information about mitigation available to the public via the City's website and/or social networking outlets.	All	Moderate	City Planning Department	Unknown	Local	1-5 Years	No progress has been made on this since the previous plan.

Scotland County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention	on			
P-1	At next Land Use Plan Update, review and include hazard mitigation objectives in to the plan where applicable and feasible.	All	Moderate	County Planning and Zoning	Unknown	Local	2023-2028.	Need to have new or revised objectives in place first. in 2022 the new revised Hazard Mitigation plan will be reviewed
P-2	Develop a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	County Planning and Zoning	Unknown	Local	2023-2028.	Services located in Floodplain areas are restricted from connection by the fact that building permits are not issued for those areas
P-3	Update the Floodplain Ordinance to raise the minimum flood protection level.	Flood	Moderate	County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
P-4	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Local	2023-2028.	No progress has been made on this since the previous plan.
P-5	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Local	2023-2028.	Not needed in rural areas at this time

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-7	Building inspections for flood damaged structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health, or other property. Plan for damaged structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams. 4. Portions of walls, floors, ceilings, etc. that have been exposed to water will be opened for evaluation. 5. All construction that is repaired, replaced, dried, or sealed will be inspected for certificate of compliance. 6. Structures inspected for certificate of correctificate of compliance.	Flood	High	County Building Inspections	Unknown	Local	2023-2028.	No structures submerged for any length of time in any recent flood event. Procedures are in place but have not been implemented due to lack of demand from any recent event.
P-9	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	High	County Planning and Zoning	Unknown	Local	2023-2028.	Limited reproduction capability exist nowmaps will be reproduced relevant to specific area affected by specific event

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Prot	ection			
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management , Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Se	rvices			
ES-1	Ensure adequate evacuation warning in case of major hazard event.	All	High	County Building Inspections; County Emergency Services	Unknown	Local	2023-2028.	Flood warning is predictable, wind loss is much less predictable and affects wider areas County and City both have "Everbridge" (Reverse 911) in place for widespread use. Need time and staffing to set up system.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Building Inspections; County Emergency Services	Unknown	Local	2023-2028.	Shelter usage is historically very limited. Funding is directed to areas of greater need
ES-3	Establish program to maintain continuity of government operations.	All	High	County Building Inspections; County Emergency Services	Unknown	Local	2023-2028.	Elected officials depend on paid staff to maintain operations in major eventthat proved to be adequate in Hurricane Matthew. Process has been presented to LEPC
			Pu	blic Education and	d Awareness			
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	County Planning and Zoning	Unknown	Local	2012- 2023.	Also available a Red Cross and EM offices

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PEA-2	The Scotland County Environmental Health has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developers with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	High	County Environmental Health Director	Unknown	Local	2023-2028	Regular part of the normal duties of this departmental position. Though more intense in a disaster situation, this process is an ongoing part of this job responsibilities and will be occurring on a regular basis regardless of disaster status in the county.
PEA-3	Provide hazard mitigation information to citizens via County website	All	Moderate	County Emergency Services	Unknown	Local	2012- 2023.	This was on the county's previous websitenew site needs to be updated to reflect new Hazard Mitigation Plan when completed.

Town of East Laurinburg Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention	on			
P-1	At next Land Use Plan Update, review and include hazard mitigation objectives in to the plan where applicable and feasible.	All	Moderate	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan. The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.
P-2	Develop a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan. The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.
P-3	Update the Floodplain Ordinance to raise the minimum flood protection level.	Flood	Moderate	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan. The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.
P-4	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan. The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-5	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan. The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-7	Building inspections for flood damaged structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health, or other property. Plan for damaged structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams. 4. Portions of walls, floors, ceilings, etc. that have been exposed to water will be opened for evaluation. 5. All construction that is repaired, replaced, dried, or sealed will be inspected for certificate of compliance. 6. Structure inspected for certificate of corpliance.	Flood	High	County Building Inspections; East Laurinburg	Unknown	Local	2023-2028	The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.
P-8	Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.	All	High	County Building Inspections; East Laurinburg	Unknown	Local	2023-2028	The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.

Action	Description	Hazard(s)	Relative	Lead Agency/	Estimated	Potential	Implementation	Implementation
#		Addressed	Priority	Department	Cost	Funding Sources	Schedule	Status (2022)
P-9	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	High	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Prot	ection			
PP-1	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
	, , , , , , , , , , , , , , , , , , ,			Emergency Se	ervices			
ES-1	Ensure adequate evacuation warning in case of major hazard event.	All	High	County Building Inspections; County Emergency Services; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Building Inspections; County Emergency Services; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-3	Establish program to maintain continuity of government operations.	All	High	County Building Inspections; County Emergency Services; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-4	Identify alternate Emergency Operations Center locations.	All	High	County Building Inspections; County Emergency Services; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-5	Identify alternate detour routes from major arteries in the County.	All	High	County Building Inspections; County Emergency Services; East Laurinburg; NCDOT	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)				
	Public Education and Awareness											
PEA-1	Place flood protection and other hazard education material in all branches of the Scotland County public library system.	All	High	County Planning and Zoning; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.				
PEA-2	The Scotland County Environmental Health has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developers with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	High	County Environmental Health Director; East Laurinburg	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.				
PEA-3	Coordinate with County Emergency Services to provide hazard mitigation information to citizens via website	All	Moderate	East Laurinburg; County Emergency Services	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.				

Town of Gibson Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)			
	Prevention										
P-1	At next Land Use Plan Update, review and include hazard mitigation objectives in to the plan where applicable and feasible.	All	Moderate	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-2	Develop a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-3	Update the Floodplain Ordinance to raise the minimum flood protection level.	Flood	Moderate	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-4	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-5	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.			
P-6	Revise and update the regulatory floodplain maps.	Flood	High	County Planning and Zoning; Gibson	Unknown	Federal; State	2023-2028	This will be completed by County GIS.			

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-7	Building inspections for flood damaged structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health, or other property. Plan for damaged structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams. 4. Portions of walls, floors, ceilings, etc. that have been exposed to water will be opened for evaluation. 5. All construction that is repaired, replaced, dried, or sealed will be inspected for certificate of compliance. 6. Structure inspected for certificate of corpliance.	Flood	High	County Building Inspections; Gibson	Unknown	Local	2023-2028	The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.
P-8	Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.	All	High	County Building Inspections; Gibson	Unknown	Local	2023-2028	The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-9	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	High	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	The Town continues to work towards implementing this action. Will continue efforts as additional resources become available.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Prot	ection			
PP-1	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Se	ervices			
ES-1	Ensure adequate evacuation warning in case of major hazard event.	All	High	County Building Inspections; County Emergency Services; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Building Inspections; County Emergency Services; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-3	Establish program to maintain continuity of government operations.	All	High	County Building Inspections; County Emergency Services; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-4	Identify alternate Emergency Operations Center locations.	All	High	County Building Inspections; County Emergency Services; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-5	Identify alternate detour routes from major arteries in the County.	All	High	County Building Inspections; County Emergency Services; Gibson; NCDOT	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
			Pu	blic Education and	d Awareness			
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	County Planning and Zoning; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
PEA-2	The Scotland County Environmental Health has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developers with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property over or developer and are usually handled through the Planning and Zoning Department.	Flood	High	County Environmental Health Director; Gibson	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PEA-3	Coordinate with County Emergency Services to provide hazard mitigation information to citizens via website	All	Moderate	Gibson; County Emergency Services	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

City of Laurinburg Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention	on			
P-1	At next Land Use Plan Update, review and include hazard mitigation objectives in to the plan where applicable and feasible.	All	Moderate	Laurinburg Planning and Zoning	Unknown	Local	2022-2028.	No progress has been made on this since the previous plan.
P-2	Develop a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	Laurinburg Planning and Zoning	Unknown	Local	2022-2028	No progress has been made on this since the previous plan.
P-3	Update the Floodplain Ordinance to raise the minimum flood protection level.	Flood	Moderate	Laurinburg Planning and Zoning	Unknown	Local	2022-2028	No progress has been made on this since the previous plan.
P-4	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	Laurinburg Planning and Zoning	Unknown	Local	2022-2028	No progress has been made on this since the previous plan.
P-5	Revise and update the regulatory floodplain maps.	Flood	High	Laurinburg Planning and Zoning	Unknown	Local	2022-2028	Done by City GIS Department

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Prot				
PP-1	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	County Planning and Zoning; Laurinburg	Unknown	Local	2023-2028	Work with the County due to the fact that the County EM has records of properties. No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Se	ervices			
ES-1	Ensure adequate evacuation warning in case of major hazard event.	All	High	County Building Inspections; County Emergency Services; Laurinburg	Unknown	Local	2023-2028	County and City share use of a contracted system from "EverBridge". System still needs data input to become operational. Will be a process of continues data entry to be fully

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
								operational. Use of Reverse 911 system. Still needs time and personnel to complete data entry task.
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Building Inspections; County Emergency Services; Laurinburg	Unknown	Local	2023-2028	City of Laurinburg has one single substation for the entire city. When it goes down, the entire city is powerless. A second electrical sub-station is needed. Funding is being
ES-3	Establish program o maintain continuity of government operations.	All	High	County Building Inspections; County Emergency Services; Laurinburg	Unknown	Local	2023-2028	Governing body depending on paid staff to manage incidents. Process working in recent eventHurricane Matthew
ES-5	Identify alternate detour routes from major arteries in the County.	All	High	County Building Inspections; County Emergency Services; Laurinburg; NCDOT	Unknown	Local	2023-2028	Based on the nature and location of the event requiring detoured routes. The nature and location of each specific event will determine the need for detoured routes and which jurisdiction would be responsible for establishing the detour routes.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
			Pu	blic Education an	d Awareness			
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	Laurinburg Planning and Zoning	Unknown	Local	2023-2028	Work with the County because all library facilities are operated by Scotland County

Town of Wagram Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Prevention	n			
P-1	At next Land Use Plan Update, review and include hazard mitigation objectives in to the plan where applicable and feasible.	All	Moderate	County Planning and Zoning; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
P-2	Develop a policy to minimize public services to proposed new structures that will be located in 100-year floodplain areas.	Flood	Moderate	County Planning and Zoning; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
P-3	Update the Floodplain Ordinance to raise the minimum flood protection level.	Flood	Moderate	County Planning and Zoning; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
P-4	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
P-5	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
P-6	Revise and update the regulatory floodplain maps.	Flood	High	County Planning and Zoning; Wagram	Unknown	Federal; State	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-7	Building inspections for damaged structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health, or other property. Plan for damaged structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams. 4. Portions of walls, floors, ceilings, etc. that have been replaced will be opened for evaluation. 5. All construction that is repaired, replaced, dried, or sealed will be inspected for certificate of compliance. 6. Structure inspected for certificate of correctificate of compliance.	Flood	High	County Building Inspections; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
P-8	Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.	All	High	County Building Inspections; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
P-9	Create a zoning map (digital) that	All	High	County Planning	Unknown	Local		No progress has been made on this since the previous
P-9	can be easily reproduced/updated for staff and public use.	All	півіі	and Zoning; Wagram	Ulikilowii	Local	2023-2028	plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
				Property Prot	ection			
PP-1	Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	County Planning and Zoning; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PP-2	Seek grant funding for mitigation opportunities eligible under the most current version of the UHMA Guidance and Public Assistance 406 mitigation guidance at the time of application. Projects could include but are not limited to: acquisition; elevation, mitigation, reconstruction, and wet/dry flood proofing to commercial and/or residential structures as applicable; redundant power to critical facilities, wind retrofits to critical facilities; storm shelters and other activities that reduces to the loss of life and property.	All hazards	High	Emergency Management, Engineering and/or Planning Departments of each jurisdiction	Project cost, Staff Hours, and applicable cost share	Federal and State Grants, Local Operating Budget	2023-2028	No progress has been made on this since the previous plan.
				Emergency Se	ervices			
ES-1	Ensure adequate evacuation warning in case of major hazard event.	All	High	County Building Inspections; County Emergency Services; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Building Inspections; County Emergency Services; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
ES-3	Establish program to maintain continuity of government operations.	All	High	County Building Inspections; County Emergency Services; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-4	Identify alternate Emergency Operations Center locations.	All	High	County Building Inspections; County Emergency Services; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
ES-5	Identify alternate detour routes from major arteries in the County.	All	High	County Building Inspections; County Emergency Services; Wagram; NCDOT	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2022)
			Pu	blic Education an	d Awareness			
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	County Planning and Zoning; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PEA-2	The Scotland County Environmental Health has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developers with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	High	County Environmental Health Director; Wagram	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.
PEA-3	Coordinate with County Emergency Services to provide hazard mitigation information to citizens via website	All	Moderate	Wagram; County Emergency Services	Unknown	Local	2023-2028	No progress has been made on this since the previous plan.

 IGATION ACTION PLAN		

SECTION 10

PLAN MAINTENANCE PROCEDURES

44 CFR Requirement

44 CFR Part201.6(c)(4)(i):

The plan shall include a plan maintenance process that includes a section describing the method and schedule of monitoring, evaluating and updating the mitigation plan within a five-year cycle.

44 CFR Part 201.6(c)(4)(ii):

The plan maintenance process shall include a process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

This section discusses how the Pee Dee Lumber Region Mitigation Strategy and Mitigation Action Plan will be implemented and how the Regional Hazard Mitigation Plan will be evaluated and enhanced over time. This section also discusses how the public will continue to be involved in a sustained hazard mitigation planning process. It consists of the following four subsections:

- ♦ 10.1 Implementation and Integration
- ♦ 10.2 Monitoring, Evaluation, and Enhancement
- ♦ 10.3 Continued Public Involvement
- ♦ 10.4 Evaluation of Monitoring, Evaluation and Update Process

10.1 IMPLEMENTATION AND INTEGRATION

Each agency, department, or other partner participating under the Pee Dee Lumber Regional Hazard Mitigation Plan is responsible for implementing specific mitigation actions as prescribed in the Mitigation Action Plan. Every proposed action listed in the Mitigation Action Plan is assigned to a specific "lead" agency or department in order to assign responsibility and accountability and increase the likelihood of subsequent implementation.

In addition to the assignment of a local lead department or agency, an implementation time period or a specific implementation date has been assigned in order to assess whether actions are being implemented in a timely fashion. The counties in the Pee Dee Lumber 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 Plan.

The participating jurisdictions will integrate this Hazard Mitigation Plan into relevant city and county government decision-making processes or mechanisms, where feasible. 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 Pee Dee Lumber Regional Hazard Mitigation Planning Committee will remain charged with ensuring that the goals and mitigation actions of new and updated local planning documents for their agencies or departments are consistent, or do not conflict with, the goals and actions of the Regional Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability in the Pee Dee Lumber Region.

Since the communities in the region first adopted hazard mitigation plans, each County and participating jurisdiction has worked to integrate the hazard mitigation plan into other planning mechanisms where applicable/feasible. Examples of how this integration has occurred have been documented in the Implementation Status discussion provided for each of the mitigation actions found in Section 9. Specific examples of how integration has occurred include:

- Integrating the mitigation plan into reviews and updates of floodplain management ordinances;
- Integrating the mitigation plan into reviews and updates of County emergency operations plans;
- Integrating the mitigation plan into review and updates of building codes; and
- ♦ Integrating the mitigation plan into the capital improvements plan through identification of mitigation actions that require local funding

Opportunities to further integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified through future meetings of the Regional Hazard Mitigation Planning Committee, individual county meetings, and the annual 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 Pee Dee Lumber Regional Hazard Mitigation Planning Committee to be the most effective and appropriate method to implement local hazard mitigation actions at this time.

10.2 MONITORING, EVALUATION, AND ENHANCEMENT

Periodic revisions and updates of the 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 the Mitigation Action Plan.

When determined necessary, the Pee Dee Lumber Regional Hazard Mitigation Planning Committee shall meet in March of every year to evaluate the progress attained and to revise, where needed, the activities set forth in the Plan. The findings and recommendations of the Regional Hazard Mitigation Planning Committee shall be documented in the form of a report that can be shared with interested City

and County Council members. The Regional Hazard Mitigation Planning Committee will also meet following any disaster events warranting a reexamination of the mitigation actions being implemented or proposed for future implementation. This will ensure that the Plan is continuously updated to reflect changing conditions and needs within the Pee Dee Lumber Region which includes the counties of Anson, Montgomery, Richmond, and Scotland. For future updates of the plan, North Carolina Emergency Management's Hazard Mitigation Planning Section will help coordinate the reconvening of the Regional Mitigation Planning Committee for these reviews through coordination with each County's Emergency Management Departments. Unless it is determined otherwise, the Emergency Management Directors from Anson, Montgomery, Richmond, and Scotland Counties will maintain ultimate responsibility for their respective County's plan implementation and monitoring, evaluation and update.

Five (5) Year Plan Review

The Plan will be thoroughly reviewed by the Regional Hazard Mitigation Planning Committee every five years to determine whether there have been any significant changes in the Pee Dee Lumber 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, an 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 participating jurisdictions 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. North Carolina Emergency Management's Hazard Mitigation Planning section will help coordinate the reconvening the Regional Mitigation Planning Committee and conducting the five-year review through coordination with each County's Emergency Management Departments.

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 County departments participate in the plan implementation process as assigned?

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

Because the plan update process can take several months to complete, and because Federal funding may be needed to update the plan, it is recommended that the five-year review process begin at the beginning of the third year after the plan was last approved. This will allow the participants in the Pee Dee Lumber Regional Hazard Mitigation Plan to organize in order to seek Federal funding if necessary and complete required plan update documentation before the plan expires at the end of the fifth year.

Disaster Declaration

Following a disaster declaration, the Pee Dee Lumber NC Regional Hazard Mitigation 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 North Carolina Emergency Management's Hazard Mitigation Planning section to coordinate the reconvening of the Regional Mitigation Planning Committee, through coordination with each County's Emergency Management Department, 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 Regional Hazard Mitigation Planning Committee in a report that will include an evaluation of the effectiveness of the Plan and any required or recommended changes or amendments. The report will also include an evaluation of implementation progress for each of the proposed mitigation actions, identifying reasons for delays or obstacles to their completion along with recommended strategies to overcome them.

Plan Amendment Process

Upon the initiation of the amendment process, the Pee Dee Lumber counties and municipalities will forward information on the proposed change(s) to all interested parties including, but not limited to, all directly affected County and municipal departments, residents, and businesses. Information will also be forwarded to the North Carolina Emergency Management. This information will be disseminated in order to seek input on the proposed amendment(s) for no less than a 45-day review and comment period.

At the end of the 45-day review and comment period, the proposed amendment(s) and all comments will be forwarded to the Regional Hazard Mitigation Planning Committee for final consideration. The Planning Committee will review the proposed amendment along with the comments received from other parties, and if acceptable, the committee will submit a recommendation for the approval and adoption of changes to the Plan.

In determining whether to recommend approval or denial of a Plan amendment request, the following factors will be considered by the Regional Hazard Mitigation Planning Committee:

- ♦ There are errors, inaccuracies, or omissions made in the identification of issues or needs in the Plan.
- New issues or needs have been identified which are not adequately addressed in the Plan.
- ♦ There has been a change in information, data, or assumptions from those on which the Plan is based.

Upon receiving the recommendation from the Regional Hazard Mitigation Planning Committee, and

prior to adoption of the Plan, the participating jurisdictions will hold a public hearing, if deemed necessary. The governing bodies of each participating jurisdiction will review the recommendation from the Regional Hazard Mitigation Planning Committee (including the factors listed above) and any oral or written comments received at the public hearing. Following that review, the governing bodies will take one of the following actions:

- Adopt the proposed amendments as presented;
- ♦ Adopt the proposed amendments with modifications;
- Refer the amendments request back to the Regional Hazard Mitigation Planning Committee for further revision; or
- Defer the amendment request back to the Regional Hazard Mitigation Planning Committee for further consideration and/or additional hearings.

10.3 CONTINUED PUBLIC INVOLVEMENT

44 CFR Requirement

44 CFR Part 201.6(c)(4)(iii):

The plan maintenance process shall include a discussion on how the community will continue public participation in the plan maintenance process

Public participation is an integral component to the mitigation planning process and will continue to be essential as this Plan evolves over time. As described above, significant changes or amendments to the Plan shall require a public hearing prior to any adoption procedures.

Other efforts to involve the public in the maintenance, evaluation, and revision process will be made as necessary. These efforts may include:

- Advertising meetings of the Regional Hazard Mitigation Planning Committee in local newspapers, public bulletin boards and/or County office buildings;
- ♦ Designating willing and voluntary citizens and private sector representatives as official members of the Regional Hazard Mitigation Planning Committee;
- Utilizing local media to update the public on any maintenance and/or periodic review activities taking place;
- Utilizing the Anson, Montgomery, Richmond, Scotland County and municipal websites to advertise any maintenance and/or periodic review activities taking place; and
- Keeping copies of the Plan in public libraries.

10.4 EVALUATION OF PREVIOUS MONITORING, EVALUATION AND UPDATE PROCESS

Over the past five years, the participating jurisdictions have been independently implementing, monitoring and evaluating their own mitigation action plans. Progress made in implementing actions

has been documented in Section 9: Mitigation Action Plan where each action contains a narrative about the implementation status of the action as of 2022. That said, the jurisdiction did waiver slightly from the monitoring and evaluation process defined in the original version of the plan, but still made significant process in implementing their mitigation action plans. During the 2022 update of this plan, the Regional Hazard Mitigation Planning Committee determined that the procedures for the upcoming five-year monitoring and evaluation process will remain as defined above and will be re-evaluated during the next plan update process.

The five-year comprehensive update process began as early as 2018 when North Carolina Emergency Management made the decision to set aside HMGP funding from Hurricane Matthew to fund the Pee Dee Lumber Regional Hazard Mitigation Plan. To facilitate this effort, NCEM assigned the plan update to their pre-qualified hazard mitigation planning consultants ESP Associates. Representatives from ESP Associates first reached out to Pee Dee Lumber representatives in July of 2021 to initiate the plan update process. More details about the plan update process are provided in Section 2, Planning Process.

For the next update of this plan, NCEM's Hazard Mitigation Planning section will continue take the lead on organizing and initiating the 5-year update of the plan.

Appendix A Plan Adoption

This Appendix includes the local adoption resolutions for each of the participating jurisdictions.

WHEREAS, (Anson County) is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the (Anson County) desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the (Anson County Board of Commissioners) to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the (Anson County Board of Commissioners) to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the (Anson County); and

WHEREAS, (Anson County), in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the (Anson County Board of Commissioners) of (Anson County hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on September 12, 2022.

EST

Jarvis T. Woodburn, Chair

Anson County Board of Commissioners

Attest:

Denise Cannon, Clerk to the Board

Anson County Board of Commissioners

Certified by: Woush Comm (SE.

Date: 9-12-2022

TOWN OF ANSONVILLE

PO BOX 437 ● ANSONVILLE, NORTH CAROLINA ● 28007 ● (704) 826-8404 ●

RESOLUTION TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS, TOWN OF ANSONVILLE is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the TOWN OF ANSONVILLE desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the ANSONVILLE TOWN COUNCIL to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the ANSONVILLE TOWN COUNCIL to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the TOWN OF ANSONVILLE; and

WHEREAS, TOWN OF ANSONVILLE, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the ANSONVILLE TOWN COUNCIL of TOWN OF ANSONVILLE hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on (2 14) FEBRUARY 14th, 2023.

Name, Chart

TOWN OF ANSONVILLE TOWN COUNCIL

Attest: SHEMETRA MECTON

Name, Clerk

TOWN OF ANSONVILLE TOWN COUNCIL

Certified by: Scare Mcc (SEAL)

Date: 2/14/2023

WHEREAS, Town of Lilesville is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the Town of Lilesville desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Lilesville Board of Commissioners to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Lilesville Board of Commissioners to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the Town of Lilesville; and

WHEREAS, Town of Lilesville, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Lilesville Board of Commissioners and the Town of Lilesville hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on March 4, 2023.

Bernice M. Bennett, Mayor
Town of Lilesville

Attest:

Dywn B. Whtlock

Lynn B Whitlock, Clerk

Certified by: AMMB W (SEAL) CORPORT SEAL TO SE

WHEREAS, (Town of McFarlan) is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the (Town of McFarlan) desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the (Town of McFarlan) to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the (Town of McFarlan) to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the (Town of Mcfarlan); and

WHEREAS, (Town of Mcfarlan), in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the (GOVERNING BODY) of (Town of McFarlan) hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and
- 2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted	on Dogganhan 2041.	0000
Adopted	on December 30th	, 2022.

Diane Timmons

Name, Chair JURISDICTION NAME GOVERNING BODY

Attest:

Haillie Halverson

Name, Clerk

JURISDICTION NAME GOVERNING BODY



Certified by: Town of McFarlan

Date: December 30th 2022

PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN RESOLUTION TO ADOPT THE

WHEREAS, Town of Morven is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and WHEREAS, the Town of Morven desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the longterm risk to life and property from hazards; and it is the intent of the Morven Town Council to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and WHEREAS,

Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the WHEREAS, it is also the intent of the Morven Town Council to fulfill its obligation under North Carolina General event of a declared disaster affecting the Town of Morven; and

Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the WHEREAS, Town of Morven, in coordination with Anson, Montgomery, Richmond, appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Morven Town Council of Town of Morven hereby:

Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and ij

Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the

Adopted on Secember 5

2022.

Tim Watkins, Mayor Morven Town Council

> Corinthia L Lewis-Lemon, Clerk Morven Town Council

Attest:

Certified by (

(SEAL)

WHEREAS, TOWN OF PEACHLAND is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the TOWN OF PEACHLAND desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the longterm risk to life and property from hazards; and

WHEREAS, it is the intent of the BOARD OF COMMISSIONERS to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the TOWN OF PEACHLAND to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the TOWN OF PEACHLAND: and

WHEREAS, TOWN OF PEACHLAND, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials:

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the BOARD OF COMMISSIONERS of TOWN OF PEACHLAND hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on

Attest:

Certified by

(SEAL)

Date:





Town of Polkton

RESOLUTION TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS, Town of Polkton is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the Town of Polkton desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Town of Polkton governing body to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Town of Polkton governing body to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the Town of Polkton; and

WHEREAS, the Town of Polkton, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Town of Polkton governing body of the Town of Polkton hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and
- 2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on March 6th , 2023.

Cynthia Williams

Mayor, Town of Polkton

Mellans

Attest:

Jerricka Napier

Clerk, Town of Polkton



Town of Wadesboro, North Carolina 28170

JOHN BALLARD MAYOR DAVID EDWARDS TOWN MANAGER

RUSSELL SIKES FRED

FRED DAVIS LE

TOWN COUNCIL LEWIS EVANS

J.F. HARWARD

CHIPPER LONG

RESOLUTION TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Wadesboro is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the Town of Wadesboro desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Wadesboro Town Council to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Wadesboro Town Council to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the Town of Wadesboro; and

WHEREAS, the Town of Wadesboro, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Town Council of Town of Wadesboro hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on J

, 2023.

John Ballard, Mayor Town of Wadesboro Attest:

Debbie Cox, Clerk Town of Wadesboro

Certified by: 1 own Clerk

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"大大士,大大大大,一大大夫就是国际,但是一个人,就是这个教教院的,这个人,还是我们还是了一个。"

· Andrew March, C. Mersey (1997), and the first Africa (1997). Andrew (1997), and the street of the control of the first and the control of the control of the control of the Andrew (1997), and the control of the con

WHEREAS, Montgomery County is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, Montgomery County desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Montgomery county Board of County Commissioners to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Montgomery county Board of County Commissioners to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting Montgomery County; and

WHEREAS, Montgomery County, in coordination with Anson, Richmond, and Scotland Counties and the municipalaties within these counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Montgomery County Board of County Commissioners of Montgomery County hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and
- 2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted this 18th day of October 2022.

Dana Dawson, Chair, Montgomery County Commissioners

A++oct.

Misty H. Coffin, Clerk to the Board

WHEREAS, (TOWN OF BISCOE) is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the (TOWN OF BISCOE) desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the (BISCOE TOWN BOARD OF COMMISSIONERS) to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the (BISCOE TOWN BOARD OF COMMISSIONERS) to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the (TOWN OF BISCOE); and

WHEREAS, (TOWN OF BISCOE), in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the (BISCOE TOWN BOARD OF COMMISSIONERS) of (TOWN OF BISCOE) hereby:

Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on May 8, 2023.

William Eddie Reynolds, Mayor

TOWN OF BISCOE BOARD OF COMMISSIONERS

Attest:

aura B. Morton, MMC, NCCMC

TOWN OF BISCOE

Certified by: | Could B. 11 OTOSEAL)

Date: 10ay 8, 2023



TOWN OF CANDOR

P.O. Box 220 214 S. MAIN ST. CANDOR, NC 27229 www.TOWNOFCANDORNC.COM (910) 974-4221 TWWRPof PHILLIP HEARNE

MANAGEMENT ADVISOR RON NILAND

COMMISSIONERS

LAYTON BOOKER TIM SMITH JERRY BREWER DAVID KELLIS DANIEL HARRIS

Candor

R2023-03-06

Resolution Adopting the Pee Dee Lumber Regional Hazard Mitigation Plan

WHEREAS, the citizens and property within the Town of Candor 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 drought, extreme heat, hailstorm, hurricane and tropical storm, lightning, thunderstorm wind/high wind, tornado, winter storm and freeze, flood, hazardous material incident, and wildfire; 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 enacted General Statute Section 166A-19.41 (State emergency assistance funds) which provides that for a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act; and.

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town 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 Candor 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 Candor hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan.
- 2. Vests Town of Candor/Montgomery County Emergency Management with the responsibility. authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
- 3. Appoints the Public Works Director in cooperation with Montgomery County Emergency Management to assure that the Hazard Mitigation Plan is reviewed annually, and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Candor Board of Commissioners for consideration.
- 4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan

Adopted this the 6th day of March 2023.

Phillip Hearne - Mayor

Town of Candor Board of Commissioners

Attest:

Tammy K Kellis

Clerk to the Board of Commissioners

Certified by:

WHEREAS, The Town of Mount Gilead is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the Town of Mount Gilead desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Town of Mount Gilead to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Town of Mount Gilead to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the Town of Mount Gilead; and

WHEREAS, the Town of Mount Gilead, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Town of Mount Gilead hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on 3/23

Mongol

Beverly Harris, Mayor Town of Mount Gilead

essie Jackson, Interim Clerk

Town of Mount Gilead

Certified by: 1884 7002

(SEAL)

OFFICIAL
SEAL
OUNT GILER

MAYOR
CRAIG JONES
MAYOR PRO-TEM
BRUCE HAMILTON
COMMISSIONERS
KAYREN BRANTLEY
ANGELA ELKINS
WALLACE JONES
DAMON PRINCE



TOWN MANAGER
GREG ZEPHIR
TOWN CLERK
CATHY MANESS
ATTORNEY
RUSSELL J. HOLLERS.III

TOWN OF TROY, NORTH CAROLINA RESOLUTION TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS, (TOWN OF TROY) is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the (TOWN OF TROY) desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the TOWN OF TROY BOARD OF COMMISSIONERS to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the (TOWN OF TROY BOARD OF COMMISSIONERS) to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the (TOWN OF TROY); and

WHEREAS, (TOWN OF TROY), in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures.

NOW, THEREFORE, BE IT RESOLVED that the BOARD OF COMMISSIONERS of the (TOWN OF TROY) hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted THIS 11th day of SEPTEMBER, 2023.

Craig Jones, Mayor
TOWN OF TROY BOARD OF COMMISSIONERS

Attest:

Amy Vuncannon, Town Clerk
TOWN OF FROY BOARD OF COMMISSIONERS

Certified by: (SEAL)

te:_____



RICHMOND COUNTY BOARD OF COMMISSIONERS

105 W FRANKLIN ST, COURTROOM C, P.O. BOX 504 ROCKINGHAM, NORTH CAROLINA 28380 TELEPHONE: (910) 997-8211

Jeff Smart
Chairman
Justin Dawkins
Vice Chairman
Tavares Bostic
Don M. Bryant
Andy Grooms
Toni Maples

Rick W. Watkins

Bryan R. Land
County Manager
William R. Webb, Jr.
County Attorney
Cary Garner
Finance Officer
Dena R. Cook
Clerk to the Board

RESOLUTION TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS Richmond County is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS Richmond County desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS it is the intent of the Richmond County Governing Board to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS it is also the intent of the Richmond County Governing Board to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the Richmond County; and

WHEREAS Richmond County in coordination with Anson, Montgomery, and Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials.

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures.

NOW, THEREFORE, BE IT RESOLVED that the Richmond County Governing Board of Richmond County, North Carolina hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on the 4th Day of October 2022.

Attest:

Leve The ('WK (SEAL)

Richmond County Government

Jeff Smart, Chairman Richmond County Government 201 West Main Street Post Office Box 1229 Hamlet, North Carolina 28345



Phone (910) 582-2651 Fax (910) 582-5815 www.hamletnc.us

RESOLUTION TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the City of Hamlet is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the City of Hamlet desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Hamlet City Council to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Hamlet City Council to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the City of Hamlet; and

WHEREAS, the City of Hamlet, in coordination with Anson, Montgomery, Richmond, and Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Hamlet City Council of the City of Hamlet hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and
- 2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on November 9, 2022.

Gail M. Strickland, City Clerl

City of Hamlet

Certified by:

Date: 1/ovember 9 2022

William Bayless, Mayor

Hamlet City Council

Or.....

SEAL) SEAL

NORTH CARMINE



WHEREAS, the City of Rockingham is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the City of Rockingham desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the City of Rockingham to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the City of Rockingham to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the City of Rockingham; and

WHEREAS, City of Rockingham, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the City Council of City of Rockingham hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on May 9 Attest: Sabrina Y. McDondki Rockingham City Clerk	John P. Hutchinson, Mayor Rockingham City Council	NOW WANTER STATE OF THE STATE O
Certified by:	(SEAL)	



RESOLUTION

TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS, Scotland County is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, Scotland County desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Scotland County Board of Commissioners to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Scotland County Board of Commissioners to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting Scotland County; and

WHEREAS, Scotland County, in coordination with the counties of Anson, Montgomery, Richmond, and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the County Commissioners of Scotland County hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and
- 2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted this the 6th day of September, 2022

Attest:

Jason Robinson, Clerk to the Board



Whit Gibson, Chair

WHEREAS, Town of Gibson is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the Town of Gibson desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Gibson Board of Commissioners to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Gibson Board of Commissioners to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the Town of Gibson; and

WHEREAS, Town of Gibson, in coordination Scotland County, City of Laurinburg and the Town of Wagram has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of Town of Gibson hereby:

1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and

Inderson (SEAL)

2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on September 8, 2022.

Gwen Arrigon, Mayor TOWN OF GIBSON

Attest:

Elizabeth Anderson

Town of Gibson, Town Clerk

Date: /

RESOLUTION NO. R-2022-27

RESOLUTION TO ADOPT THE PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the City of Laurinburg is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the City of Laurinburg desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the City of Laurinburg to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Laurinburg City Council to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the City of Laurinburg; and

WHEREAS, the City of Laurinburg, in coordination with Anson, Montgomery, Richmond, Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Laurinburg hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and
- 2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on the 20th day of September, 2022.

James T. Willis, Mayor

City of Laurinburg

Jennifer A/Tippett,

Ofty of Laurinburg

WHEREAS, the Town of Wagram is vulnerable to an array of hazards that can cause loss of life and damages to public and private property; and

WHEREAS, the Town of Wagram desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the development and implementation of a hazard mitigation plan can result in actions that reduce the long-term risk to life and property from hazards; and

WHEREAS, it is the intent of the Wagram Board of Commissioners to protect its citizens and property from the effects of hazards by preparing and maintaining a local hazard mitigation plan; and

WHEREAS, it is also the intent of the Wagram Board of Commissioners to fulfill its obligation under North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act and Section 322: Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to remain eligible to receive state and federal assistance in the event of a declared disaster affecting the Town of Wagram; and

WHEREAS, the Town of Wagram, in coordination with Anson, Montgomery, Richmond, and Scotland Counties and the municipalities within those counties has prepared a multi-jurisdictional hazard mitigation plan with input from the appropriate local and state officials;

WHEREAS, the North Carolina Emergency Management has reviewed the Pee Dee Lumber Regional Hazard Mitigation Plan for legislative compliance and has approved the plan pending the completion of local adoption procedures;

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Town of Wagram hereby:

- 1. Adopts the Pee Dee Lumber Regional Hazard Mitigation Plan; and
- 2. Agrees to take such other official action as may be reasonably necessary to carry out the proposed actions of the Plan.

Adopted on September 1, 2022

George Purcell, Mayor

TOWN OF WAGRAM BOARD OF COMMISSIONERS

-ALICST.

Roosevelt Henegan, Town Clerk

TOWN OF WAGRAM BOARD OF COMMISSIONERS

Certified by:

(SEAL)

Date: Sertember 1, 2022

Appendix B Planning Tools

This Appendix includes the following:

- 1. A Blank Hazard Mitigation Public Survey
- 2. GIS Data Inventory Spreadsheet
- 3. Scoring Criteria for Capability Assessment
- 4. A Blank Mitigation Action Worksheet



Pee Dee Lumber Regional Hazard Mitigation Plan - Public Survey

Please take my survey - thanks!

1 1\	1 1\. Where do you live?*			
	Ansonville	\bigcirc	Morven	
	Wadesboro		Lilesville	
$\widetilde{\bigcirc}$	Peachland	$\widetilde{\bigcirc}$	McFarlan	
$\overline{\bigcirc}$	Polkton	Ŏ	Biscoe	
	Star		Candor	
	Troy		Mount Gilead	
	Dobbins Heights		Hoffman	
	Ellerbe		Norman	
	Hamlet		Rockingham	
	East Laurinburg		Wagram	
	Gibson		Unincorporated Anson County	
	Unincorporated Montgomery County		Unincorporated Richmond County	
\bigcirc	Unincorporated Scotland County			

^{*} Choose one.

2 2\. Have you ever experienced or been impacted by a disaster in Anson, Montgomery,
Richmond, or Scotland County?*
Yes
○ No
* Choose one.
Choose one.
3 3\. If "Yes," please explain.
3 31. II Tes, please explain.
4 5\. How concerned are you about the possibility of your community being impacted by
a disaster?*
Extremely concerned

Somewhat concerned	
Not concerned	
* Choose one.	
5 5\. Please select one hazard you think is	the highest threat to your neighborhood:*
Cyber Attack	Dam Failure
Drought	Earthquakes
Electromagnetic Pulse (EMP)	Erosion
Excessive Heat	Flooding
Hazardous Substances	Hurricane and Coastal Hazards
Infectious Disease	Landslides
Lightning	Radiological Emergency
Severe Thunderstorms/High Winds	Severe Winter Weather
Terrorism	Tornadoes
Wildfire	
* Choose one.	
6 6\. Please select one hazard you think is neighborhood:*	the second highest threat to your
Cyber Attack	Drought
Electromagnetic Pulse (EMP)	Erosion

Excessive Heat Hazardous Substances Infectious Disease Lightning Severe Thunderstorms/High Wind Terrorism	Flooding Hurricane and Coastal Hazards Landslides Radiological Emergency Severe Winter Weather Tornado
* Choose one.	
7 7\. Are there any other hazards that you community? If so, please explain:	feel pose a wide-scale threat to your
8 8\. Is your home located in a floodplain?	*
Yes	

○ No
I'm not sure
* Choose one.
9 9\. Do you have flood insurance?*
Yes
No
I'm not sure
* Choose one.
10 10\. If you do not have flood insurance, why not?
Not located in floodplain
Too expensive
Not necessary because it never floods
Not necessary because I am elevated or otherwise protected
Never really considered it
Other
* Choose one.

11 11\. If "Other," please explain:	
12 12\. Have you taken any steps to make your home or neighborhood more resistance?*	stant to
O Vas	
Yes No	
* Choose one.	
13 13\. If "Yes," please explain:	

14 14\. Are you interested in making your home or neighborhood more resistant to hazards?*
Yes No
* Choose one.
15 15\. Do you know what office to contact to find out how to reduce your risks to hazards in your area?*
Yes No * Choose one.

16 16\. What is the most effective way for y	ou to receive information about how to make
your home and neighborhood more resistar	nt to hazards?*
Newspaper	Television
Radio	Internet (including social media)
Mail	Public Workshops/Meetings
School Meetings	
* Choose one.	
17 17\. Are there any other ways you prefer	to receive information? If so, please
explain:	

18\. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

19 19\. Are the with hazards of explain:			
with hazards o			

A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six

questions, please tell us how important you think each one is for your community to consider pursuing.
20\. Prevention - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.*
Very important Somewhat important Not important * Choose one.
21 21\. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.
(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) *
Very important Somewhat important Not important * Choose one.

22 22\. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)*
Very important Somewhat important
Not important Not important
* Choose one.
23 23\. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.
(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)*
Very important Somewhat important Not important
* Choose one.

24 24\. **Emergency Services** - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)*
Vert important Somehwat important Not important
* Choose one.
25 25\. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.
(Examples include outreach projects, school education programs, library materials and demonstration events.)*
Very important Somewhat important Not important
* Choose one.

26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)





Thanks for taking this survey!

GIS DATA INVENTORY

DATA DESCRIPTION	AVAILABLE?	RECEIVED?	SOURCE(S)
Administrative / Political Boundaries			
County boundaries			
Municipal boundaries			
Tax parcels *			
* At a minimum, attribute data for tax parcels should include add	ress, building type,	square footage, b	puilding value and year built.
Population and Demographics	3 37 27	- 4	
Census block data *			
* Anything better than Census 2000 data?			
Buildings and Facilities			
Building footprints			
Existing building stock, by occupancy class			
Government buildings			
County offices, city/town halls, etc.			
Police stations			
Fire/Rescue stations			
Emergency Operations Centers			
Public works facilities			
Communication facilities			
Hazardous materials facilities			
Hospitals			
Schools			
Shelters			
Senior care facilities			
Day care facilities			
Historic properties			
Power generation facilities / transmission lines			
Water/wastewater facilities / distribution lines			
Pipelines			
Repetitive loss properties (NFIP)			
Repetitive loss properties (RFIII)			
Topography, Hydrology, Geology			
Contour data (two foot)			
Digital Elevation Model			
Watershed boundaries			
Rivers and streams			
Lakes and ponds			
Ocean / shoreline			
Wetlands			
Geology			
Soils			
Cons			
Transportation			
Highways and roads (center lines)			
Bridges			
Railways			
Airports			
Ports			
1 010			
Land Use			
Land Use / Land Cover			
Zoning / Future Land Use			
Parks / Open Space			
Preserved Farmland			
Acquired properties (HMGP buyouts, etc.)			
Augulieu properties (Flivior Duyouts, 8tc.)	<u> </u>		

GIS DATA INVENTORY

DATA DESCRIPTION	AVAILABLE?	RECEIVED?	SOURCE(S)
Aerial Imagery			
High-resolution digital orthophotography			
Hazards			
DROUGHT			
Palmer Drought Severity Index (PDSI)	X	Х	National Drought Mitigation Center
FLOOD			
FEMA Digital Flood Data (DFIRMs)			FEMA
Location of dams, levees and any inundation zones			
HURRICANE AND TROPICAL STORM			
Historical storm tracks	X	Х	NOAA
THUNDERSTORM			
Thunderstorm frequency	X	Х	NOAA
Lightning frequency	X	Х	NOAA
Hail frequency	X	Х	NOAA
TORNADO			
Historical tornado locations	X	Χ	NOAA
WILDFIRE			
Wildfire hazard areas, fuel maps, etc.			
Urban/wildland interface communities			
WINTER STORM			
Annual snow/ice precipitation	Х	X	NOAA
OTHER			
Any other data on historic events/ damages			

Points System for Capability Ranking

0-24 points = Limited overall capability 25-49 points = Moderate overall capability 50-80 points = High overall capability

I. Planning and Regulatory Capability (Up to 43 points)

Yes = 3 points Under Development = 1 point No = 0 points

- Hazard Mitigation Plan
- Comprehensive Land Use Plan
- Floodplain Management Plan
- Participate in NFIP
- Participate in CRS Program

Yes = 2 points Under Development = 1 point No = 0 points

- Open Space Management / Parks & Rec. Plan
- Stormwater Management Plan
- Natural Resource Protection Plan
- Flood Response Plan
- Emergency Operations Plan
- Continuity of Operations Plan
- Evacuation Plan
- Disaster Recovery Plan
- Flood Damage Prevention Ordinance
- Post-Disaster Redevelopment / Reconstruction Ordinance

Yes = 1 point No = 0 points

- Capital Improvements Plan
- Economic Development Plan
- Historic Preservation Plan
- Zoning Ordinance
- Subdivision Ordinance
- Unified Development Ordinance
- Building Code
- Fire Code

II. Administrative and Technical Capability (Up to 15 points)

Yes = 2 points No = 0 points

- Planners with knowledge of land development and land management practices
- Engineers or professionals trained in construction practices related to buildings and/or infrastructure
- Planners or engineers with an understanding of natural and/or behazards
- Emergency manager
- Floodplain manager

Yes = 1 point No = 0 points

- Land surveyors
- Scientist familiar with the hazards of the community
- Staff with education or expertise to assess the community's vulnerability to hazards
- Personnel skilled in Geographic Information Systems (GIS) and/or HAZUS
- Resource development staff or grant writers

III. Fiscal Capability (Up to 10 points)

Yes = 1 point No = 0 points

- 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/ Revenue/ Special Tax Bonds
- Partnering arrangements or intergovernmental agreements
- Other

IV. Self-Assessment of Overall Capability (Up to 10 points)

High = 2 pointsModerate = 1 points Low = 0 points

- **Technical Capability**
- Fiscal Capability
- Administrative Capability
 Political Capability
- Overall Capability

MITIGATION ACTION WORKSHEETS

Mitigation Action Worksheets are used to identify potential hazard mitigation actions that participating jurisdictions in the Pee Dee Lumber Region will consider to reduce the negative effects of identified hazards. The worksheets provide a simple yet effective method of organizing potential actions in a user-friendly manner that can easily be incorporated into the Region's Hazard Mitigation Plan.

The worksheets are to be used as part of a strategic planning process and are designed to be:

- a.) completed electronically (worksheets and instructions will be e-mailed to members of the Hazard Mitigation Planning Team following the Mitigation Strategy Workshop);
- b.) reviewed with your department/organization for further consideration; and
- c.) returned according to the contact information provided below.

Please return all completed worksheets to:

Nathan Slaughter - ESP Associates, Inc.
Electronic copies may be e-mailed to: nslaughter@espassociates.com

INSTRUCTIONS

Each mitigation action should be considered to be a separate local project, policy or program and each individual action should be entered into a separate worksheet. By identifying the implementation requirements for each action, the worksheets will help lay the framework for engaging in distinct actions that will help reduce the community's overall vulnerability and risk. Detailed explanations on how to complete the worksheet are provided below.

Proposed Action: Identify a specific action that, if accomplished, will reduce vulnerability and risk in the impact area. Actions may be in the form of local policies (i.e., regulatory or incentive-based measures), programs or structural mitigation projects and should be consistent with any pre-identified mitigation goals and objectives.

Site and Location: Provide details with regard to the physical location or geographic extent of the proposed action, such as the location of a specific structure to be mitigated, whether a program will be citywide, countywide or regional, etc.

History of Damages: Provide a brief history of any known damages as it relates to the proposed action and the hazard(s) being addressed. For example, the proposed elevation of a repetitive loss property should include an overview of the number of times the structure has flooded, total dollar amount of damages if available, etc.

Hazard(s) Addressed: List the hazard(s) the proposed action is designed to mitigate against.

Category: Indicate the most appropriate category for the proposed action as discussed during the Mitigation Strategy Workshop (Prevention; Property Protection; Natural Resource Protection; Structural Projects; Emergency Services; Public Education and Awareness).

Priority: Indicate whether the action is a "high" priority, "moderate" priority or "low" priority based generally on the following criteria:

- 1. Effect on overall risk to life and property
- 2. Ease of implementation / technical feasibility
- 3. Project costs versus benefits
- 4. Political and community support
- 5. Funding availability

Estimated Cost: If applicable, indicate what the total cost will be to accomplish this action. This amount will be an estimate until actual final dollar amounts can be determined. Some actions (such as ordinance revisions) may only cost "local staff time" and should be noted so.

Potential Funding Sources: If applicable, indicate how the cost to complete the action will be funded. For example, funds may be provided from existing operating budgets or general funds, a previously established contingency fund, a cost-sharing federal or state grant program, etc.

Lead Agency/Department Responsible: Identify the local agency, department or organization that is best suited to implement the proposed action.

Implementation Schedule: Indicate when the action will begin and when the action is expected to be completed. Remember that some actions will require only a minimal amount of time, while others may require a long-term or continuous effort.

Comments: This space is provided for any additional information or details that may not be captured under the previous headings.

MITIGATION ACTION

	Proposed Action:		
	BACKGROUND INFORMA	TION	
	Site and Location:		
	History of Damages:		
	, ,		
МІТ	TIGATION ACTION DETAILS	3	
Haz	zard(s) Addressed:		
	tegory:		
	ority (High, Moderate, Low)	:	
	imated Cost:		
	tential Funding Sources:	noncible:	
	ad Agency/Department Resolementation Schedule:	ponsible:	
11114	nementation schedule.		
CO	MMENTS		

Appendix C Local Mitigation Plan Review Tool

LOCAL MITIGATION PLAN REVIEW TOOL

Jurisdiction:

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 <u>Regulation Checklist</u> provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The <u>Plan Assessment</u> 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*.

Date of Plan:

Title of Plan:

participants in Section 3)	Mitigation Plan	Regional Hazard	May 2022
Local Point of Contact: Nathan Slaughter Title: Hazard Mitigation Department Man Agency: ESP Associates		Address: 2200 Gateway Cer Blvd., Suite 216 Morrisville, NC	ntre
Phone Number:		E-Mail:	
919-244-9536		nslaughter@esp	associates.com
State Reviewer:	Title:		Date:
State Neviewer.	nite.		Date.
FEMA Reviewer:	Title:		Date:
Date Received in FEMA Region			
Plan Not Approved			
Plan Approvable Pending Adoption		<u>-</u>	
Plan Approved			

SECTION 1: REGULATION CHECKLIST

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or	Met	Not Met
ELEMENT A. PLANNING PROCESS	page number)	Met	IVIEC
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Section 2		
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Section 2.7, Page 2:13; Appendix D		
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 2.6, Pages 2:12-13; Appendix D		
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Section 7		
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Section 10.3, Page 10:5		
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Section 10		
ELEMENT A: REQUIRED REVISIONS			
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSM	ENT		
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))	Sections 4 and 5		
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	Section 5		
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))	Sections 5 and 6		
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Section 5, page 5:58		
ELEMENT B: REQUIRED REVISIONS			

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
ELEMENT C. MITIGATION STRATEGY	P0		
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Section 7		
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Section 7, page 7:9 and 7:10		
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 8.2, Pages 8:3-5		
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Section 9		
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Section 8 and 9		
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Section 10, Pages 10:1-2		
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENT	ITATION (applicable to	plan upo	dates
only) D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	This is a new plan		
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	This is a new plan		
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	This is a new plan		
ELEMENT D: REQUIRED REVISIONS			
ELEMENT E. PLAN ADOPTION			

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
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))	Attachment		
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	Attachment		
ELEMENT E: REQUIRED REVISIONS			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL NOT TO BE COMPLETED BY FEMA)	AL FOR STATE REVIE	WERS (ONLY;
F1.			
F2.			
ELEMENT F: REQUIRED REVISIONS			

SECTION 2: PLAN ASSESSMENT

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			
Plan Strengths:			
Opportunities for Improvement:			
Flowerst D. Honord Identification and Biole Assessment			
Element B: Hazard Identification and Risk Assessment Plan Strengths:			
Tidii Sticiigais.			

pportunities for Improvement:	
pportunities for improvement.	
lement C: Mitigation Strategy	
lement C. Witigation Strategy	
lan Strengths:	
pportunities for Improvement:	

lan Strengths:	date, Evaluation, a	na implementatio	on (<i>Plan Update</i> :	s Only)	
Opportunities for Impro	ovement:				
Posseuros for Im	nlomanting Value A	naround Plan			
. Resources for im	plementing Your A	pproved Plan			

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).

					MULT	I-JURISDICTI	ON SUMMA	ARY SHEET				
		Jurisdiction							Requiremen	ts Met (Y/N)		
#	Jurisdiction Name	Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require- ments
1	Anson County	County										
2	Ansonville	Town										
3	Lilesville	Town										
4	McFarlan	Town										
5	Morven	Town										
6	Peachland	Town										

					MULT	I-JURISDICTI	ON SUMM	ARY SHEET				
		Jurisdiction							Requiremen	ts Met (Y/N)		
#	Jurisdiction Name	Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require- ments
7	Polkton	Town										
8	Wadesboro	Town										
9	Montgomery County	County										
10	Biscoe	Town										
11	Candor	Town										
12	Mount Gilead	Town										
13	Star	Town										
14	Troy	Town										
15	Richmond County	County										
16	Dobbins Heights	Town										

					MULT	I-JURISDICTI	ON SUMMA	ARY SHEET				
		Jurisdiction								ts Met (Y/N)		
#	Jurisdiction Name	Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require- ments
17	Ellerbe	Town										
18	Hamlet	Town										
19	Hoffman	Town										
20	Norman	Town										
21	Rockingham	City										
22	Scotland County	Town										
23	Gibson	Town										
24	Laurinburg	Town										
25	Wagram	Town										
26												

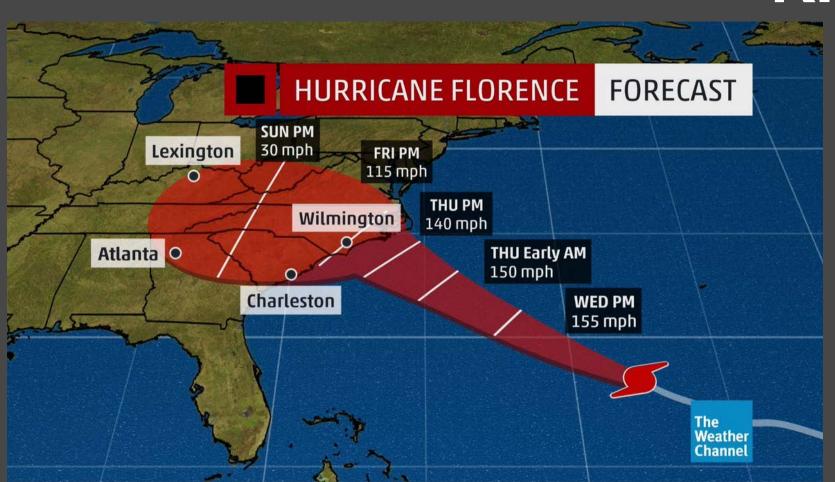
A-10 Local Mitigation

Appendix D Planning Process Documentation

This appendix includes:

- 1. Meeting Presentations
- 2. Meeting Attendance Logs
- 3. Public Survey Summary Results
- 4. Notification of Neighboring Jurisdictions

PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN KICKOFF MEETING



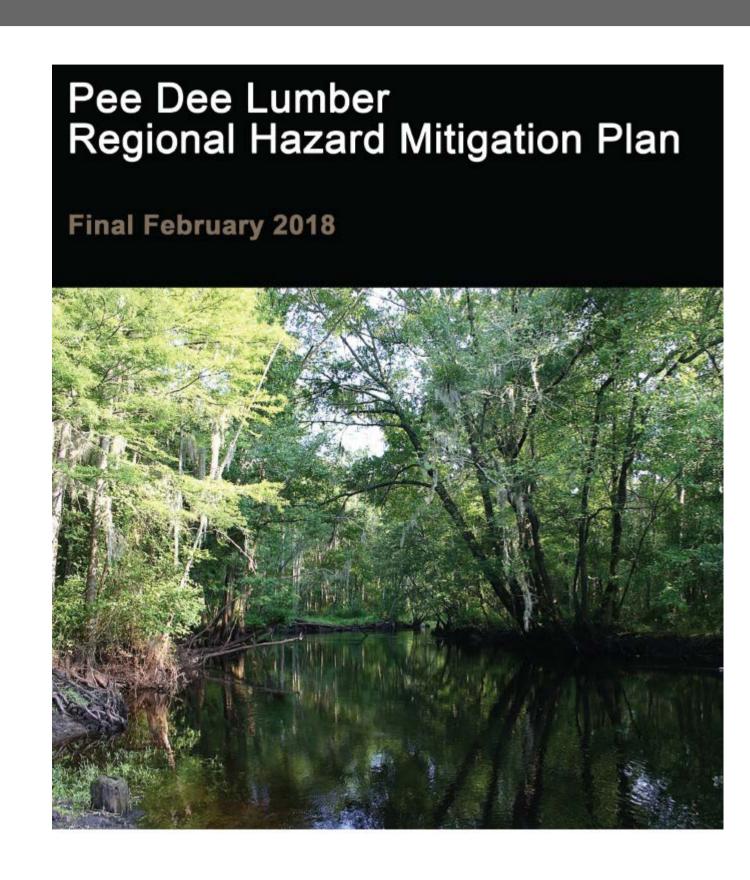








- Introductions
- Mitigation Refresher
- Project Overview
 - Key Objectives
 - Project Tasks
 - Project Schedule
 - Project Staffing
- Roles & Responsibilities
- Next Steps
- Questions, Issues or Concerns



INTRODUCTIONS

- ESP Associates
 - Nathan Slaughter, AICP, CFM Project Manager
- County Leads
- NCEM

PROJECT INFORMATION



- Funded with a Federal HMGP Grant (Hurricane Matthew)
- NCEM is managing the grant providing contractor support
- No local match requirement (State is covering)

WHAT IS MITIGATION?





"mit-i-gate"

1: to cause to become less harsh or hostile.

2: to make less severe or painful.



Hazard Mitigation

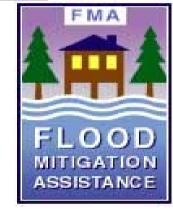
Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards.

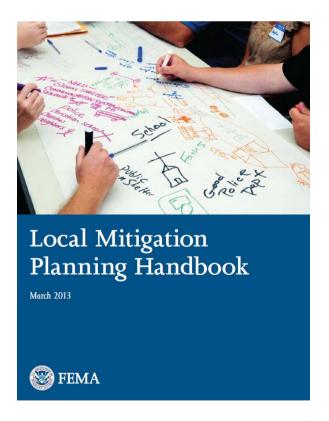
DISASTER MITIGATION ACT OF 2000

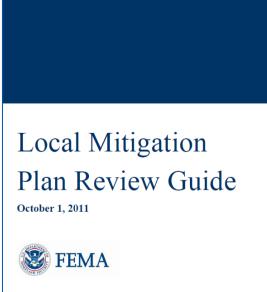
- Revitalized Federal Planning Requirements
 - State and Local Hazard Mitigation Plans
- Federal Grant Funding Eligibility
 - Hazard Mitigation Grant Program (HMGP)
 - Building Resilient Infrastructure and Communities (BRIC)
 - Formerly Pre-Disaster Mitigation Program (PDM)
 - Flood Mitigation Assistance (FMA)
- DMA 2000 is intended to facilitate cooperation between state and local authorities on risk reduction measures and expedite funding allocation











NC SENATE BILL 300



- Passed in June of 2001, amends the North Carolina Emergency Management Act (166A)
 - Requires local hazard mitigation plans in order to maintain eligibility for Public Assistance (PA) for statedeclared disasters

GENERAL ASSEMBLY OF NORTH CAROLINA SESSION 2001

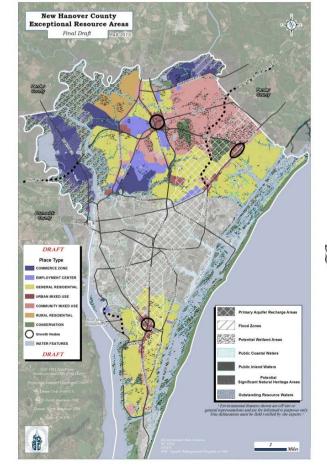
> SESSION LAW 2001-214 SENATE BILL 300

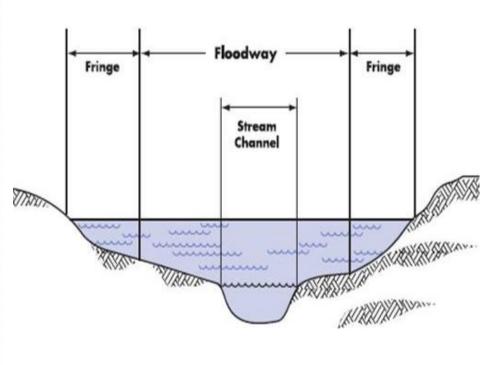
AN ACT TO AMEND THE LAWS REGARDING EMERGENCY MANAGEMENT AS RECOMMENDED BY THE LEGISLATIVE DISASTER RESPONSE AND RECOVERY COMMISSION.

THINK OF MITIGATION IN THIS WAY...

- 1) We want to mitigate hazard impacts on the existing development in our communities
 - Houses, businesses, infrastructure, critical facilities, etc.
- 2) We want to ensure that future development is conducted in a way that doesn't increase our vulnerability
 - Best done by having good plans, policies and procedures in place



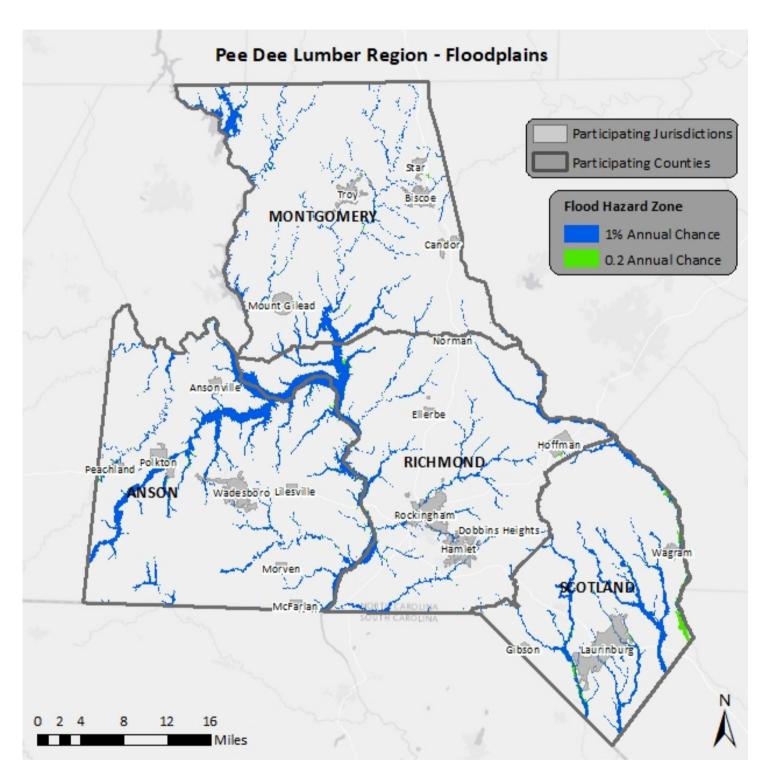




HAZARD MITIGATION TECHNIQUES



- 1) Prevention
- 2) Property Protection
- 3) Natural Resource Protection
- 4) Structural Projects
- 5) Emergency Services
- 6) Public Education and Awareness



Flood Hazard Areas in the Pee Dee Lumber NC Region Source: Federal Emergency Management Agency

PREVENTION







Planning and Zoning

Building codes

Open space preservation

Floodplain regulations

Stormwater management regulations

Drainage system maintenance

Capital improvements programming

PROPERTY PROTECTION





Acquisition

Relocation

Building elevation



Critical facilities protection



Retrofitting

Safe rooms

Shatter-resistant glass

Insurance



NATURAL RESOURCE PROTECTION



Floodplain protection

Watershed management

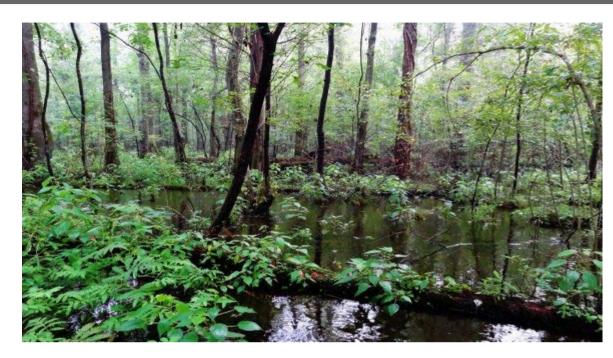
Riparian buffers

Forest management

Erosion and sediment control

Wetland restoration

Habitat preservation









STRUCTURAL PROJECTS





Reservoirs

Dams, levees

Floodwalls

Stormwater diversions





Detention/retention basins

Channel modification

Storm sewers



EMERGENCY SERVICES



Warning systems

Emergency response equipment

Shelters

Evacuation planning



Emergency response training

Sandbagging

Temporary shutters





PUBLIC EDUCATION AND AWARENESS









Hazard map information

Library materials

School educational programs

Hazard expositions

Real estate disclosure

Demonstration events







	CEBREAKER	EXERCISE
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Prevention	Property Protection	Natural Resource Protection	Structural Projects	Emergency Services	Public Education/ Awareness
Zoning Building codes Open space preservation Floodplain regulations Stormwater management regulations	Relocation Building elevation Critical facilities protection Retrofitting Safe rooms, shutters, shatter- resistant glass Insurance	Floodplain protection Watershed management Riparian buffers Forest management Erosion and sediment control Wetland preservation and restoration Habitat preservation	Dams, levees, dikes Floodwalls Stormwater diversions Detention/retention basins Channel modification Storm sewers	Emergency response equipment Shelter Operations Evacuation planning and management Emergency response training and exercises Sandbagging for flood protection Temporary shutters	Outreach projects Speaker series/ demonstration events Hazard map information Real estate disclosure Library materials School children educational programs Hazard expositions

Pee Dee Lumber Regional Hazard Mitigation Plan Update | Kickoff Meeting

KEY OBJECTIVES



- Coordinate between four counties to update the regional plan
- Complete update of existing plan to demonstrate progress and reflect current conditions
- Current plan expires March 22, 2023
- Increase public awareness and education
- Maintain grant eligibility for participating jurisdictions
- Update plan in accordance with Community Rating System (CRS) requirements
- Maintain compliance with State and Federal requirements

NEW ELEMENTS

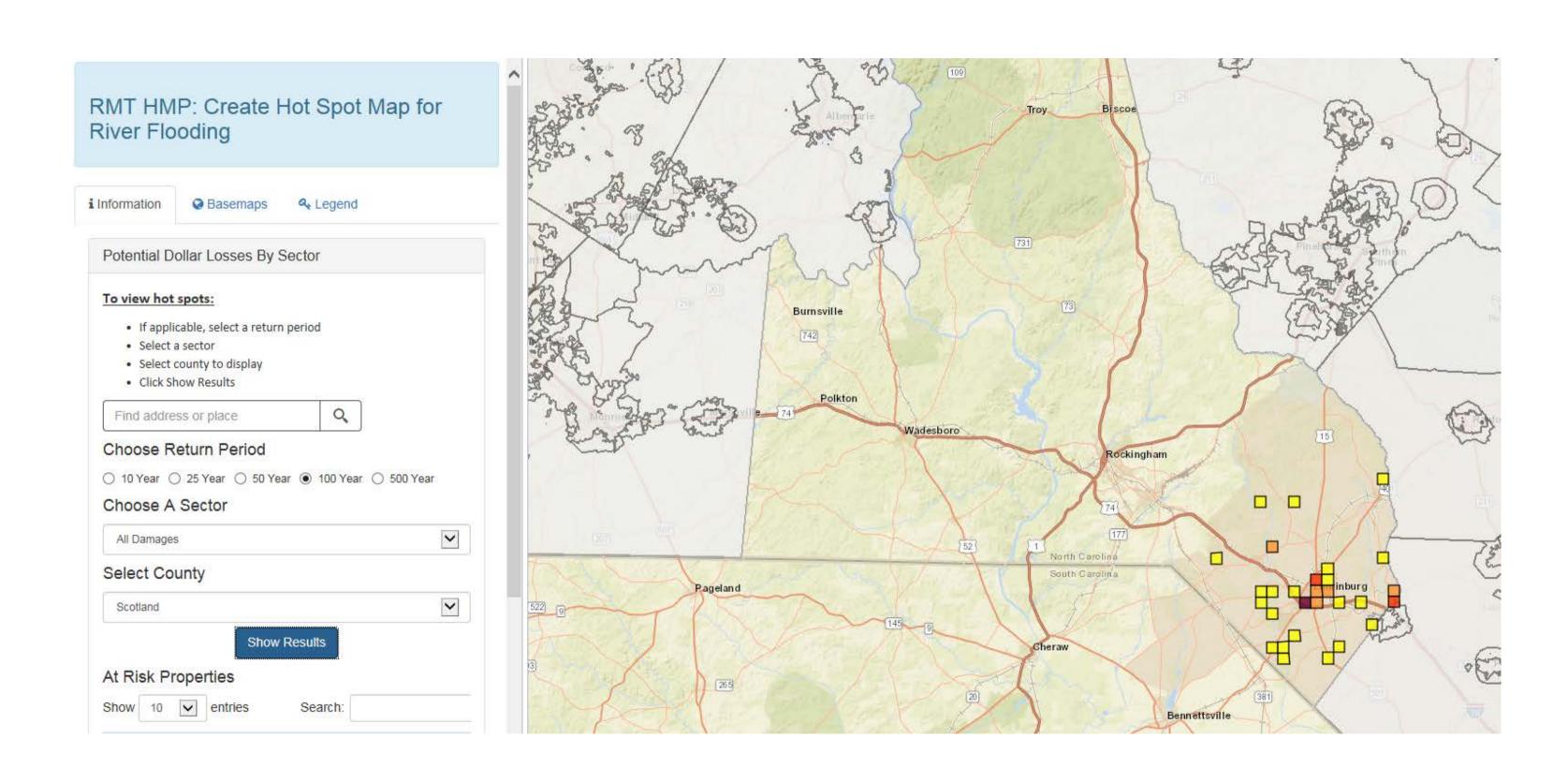
- Will use NCEM's RMT Hazard Mitigation Plan Tool
 - Website used to create, update, customize, and monitor plans
 - Promotes consistency throughout NC
- Update plan to include CRS 510 Compliance
 - Only for CRS Communities
- Risk Mapping, Assessment and Planning (Risk MAP)
 - Flood Risk Products and Tools
- Integrate Community Wildfire Protection Plans (CWPPs) elements
- Conduct Resilience Assessment
 - North Carolina Scorecard
- EMAP Compliant
 - Technological and Manmade Hazards

PROJECT EXPECTATIONS



- Any hazards on which you would like us to focus?
- Any areas of vulnerability on which to focus?
 - More of a focus on identification of problems and the specific solutions to those problems
- Anything else to highlight or consider?





PARTICIPATING JURISDICTIONS



Anson County	AnsonvilleMorvenWadesboro	LilesvillePeachland	McFarlanPolkton
Montgomery County	BiscoeStar	CandorTroy	Mount Gilead
Richmond County	Dobbins HeightHoffman	EllerbeNorman	HamletRockingham
Scotland County	East LaurinburgWagram	• Gibson	• Laurinburg

PROJECT TASKS

- 1. Planning Process
- 2. Risk Assessment
- 3. Capability Assessment
- 4. Mitigation Strategy
- 5. Plan Maintenance
- 6. Documentation



PLANNING PROCESS



- Reconvene Hazard Mitigation Planning Team (HMPT)
- Widespread public participation and outreach to key stakeholders
- Data collection and analysis
- Plan preparation and submission

RISKASSESSMENT

- Hazard Identification and Analysis
 - Detailed profiles for all hazards
 - Hazard description
 - Historical occurrences
 - Known hazard boundaries
 - Priority Risk Index (PRI)
- Vulnerability Assessment
 - Asset inventory (exposure)
 - Loss estimates

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PRI Category Leve		Level	Criteria	Index Value	Assigned Weighting Factor
		Unlikely	Less than 1% annual probability	1	
	Probability	Possible	Between 1 and 10% annual probability	2	30%
	Probability	Likely	Between 10 and 100% annual probability	3	30%
		Highly Likely	100% annual probability	4	
		Minor	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.	1	
	Impact	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2	200/
		Critical	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one week.	3	30%
		Catastrophic	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	4	

Development Trends and Implications

HAZARD IDENTIFICATION

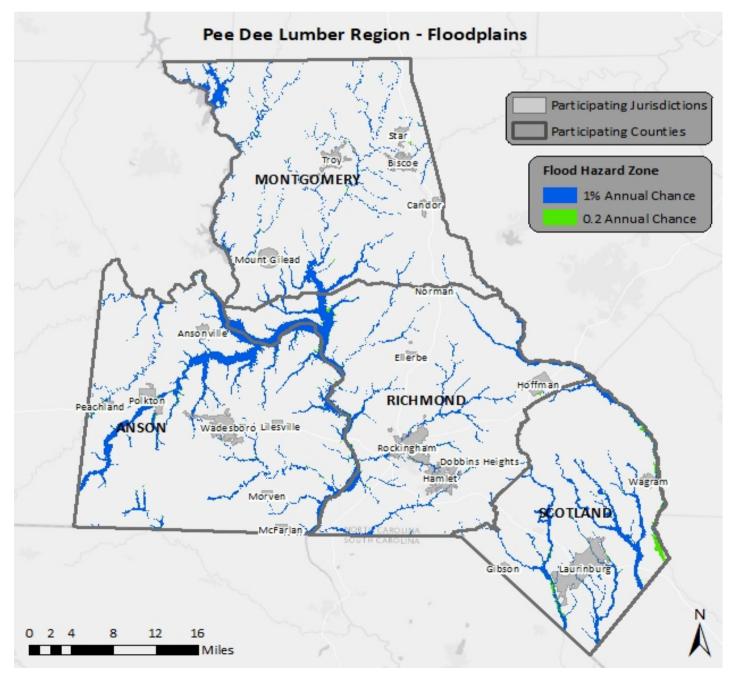
State of North Carolina Hazard Mitigation Plan Hazards

Natural Hazards	Technological Hazards
Flooding	Hazardous Substances
Hurricanes and Coastal Hazards	 Hazardous Materials
Severe Winter Weather	 Hazardous Chemicals
Excessive Heat	- Oil Spill
Earthquakes	Radiological Emergency – Fixed Nuclear Facilities
Wildfires	Terrorism
Dam Failures	 Chemical
Drought	 Biological
Tornadoes/Thunderstorms	 Radiological
Geological	 Nuclear
 Landslides/Rock Fall 	 Explosive
Sinkholes	Cyber
Infectious Disease	Electromagnetic Pulse

VULNERABILITY ASSESSMENT



- Where possible, identify types and numbers of assets at risk to hazards.
- Consider other types of vulnerability as well
 - Social, economic, environmental



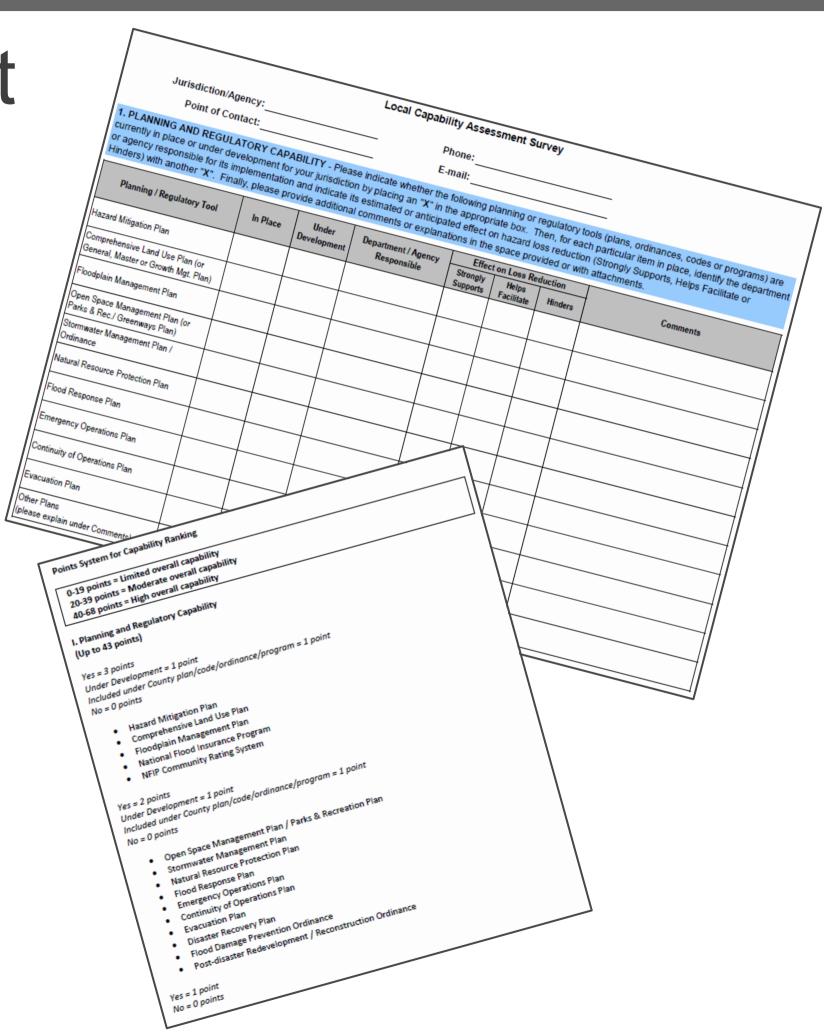
CAPABILITY ASSESSMENT

- Measures capability to implement hazard mitigation activities
- Identifies and targets gaps, conflicts and opportunities with existing local plans, programs, policies, etc.
- Identifies mitigation measures already in place or underway

Plan Policy, Program or Ordinance	Percentage
Capital Improvements Plan	54%
Historic Preservation Plan	0%
Zoning Ordinance	97%
Subdivision Ordinance	89%
Flood Damage Prevention Ordinance	86%
Post-Disaster Redevelopment Plan	0%
Building Code	100%
Fire Code	100%

CAPABILITY ASSESSMENT

- Capability Assessment Survey
 - Measures existing capabilities
 - Planning and regulatory
 - Administrative and technical
 - Fiscal
 - Political



MITIGATION STRATEGY

- Mitigation Goals
 - Based upon findings of the risk and capability assessments
- Identification and analysis of mitigation measures
 - Prevention, property protection, natural resource protection, structural projects, emergency services, and public education and awareness

MITIGATION ACTION PLAN

EXAMPLE from Previous Update

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Action Date	Implementation Schedule	Narrative Explanation
P-11	Develop a policy to minimize public services to proposed new structures that will be located in 100- year floodplain areas.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	2018-2023.	No progress has been made on this since the previous plan.

PLAN MAINTENANCE

- Monitoring and reporting
- Evaluating and updating
- Implementation mechanisms
- Continued public involvement



DOCUMENTATION

- Full description of planning process
 - Use of best available data
- Plan adoption
 - -Local resolution required for final FEMA approval
- Local Mitigation Plan Review Tool "Crosswalk"

PROJECT SCHEDULE	
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NOV

DEC

JAN

FEB

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FEB

MARCH

MARCH

APR 2022-

APR 2023

APR 2022-

APR 2023

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Proj	ect	Tasks

Meetings

Milestones

Submission of Draft Risk Assessment to Planning Team

Completion of Final Plan/Conditional FEMA Approval

Submission of Draft Risk Assessment to NCEM

Submission of Draft Plan to Planning Team

Submission of Draft Plan to NCEM/FEMA

Submission of Final Plan to NCEM/FEMA

Local Adoption of Final Plan

Notice to Proceed

Planning Process

Risk Assessment

Capability Assessment

Plan Maintenance Procedures

Regional Hazard Mitigation Team Meetings

Mitigation Strategy

Documentation

Kickoff Meeting

Open Public Meetings

Month

OCT

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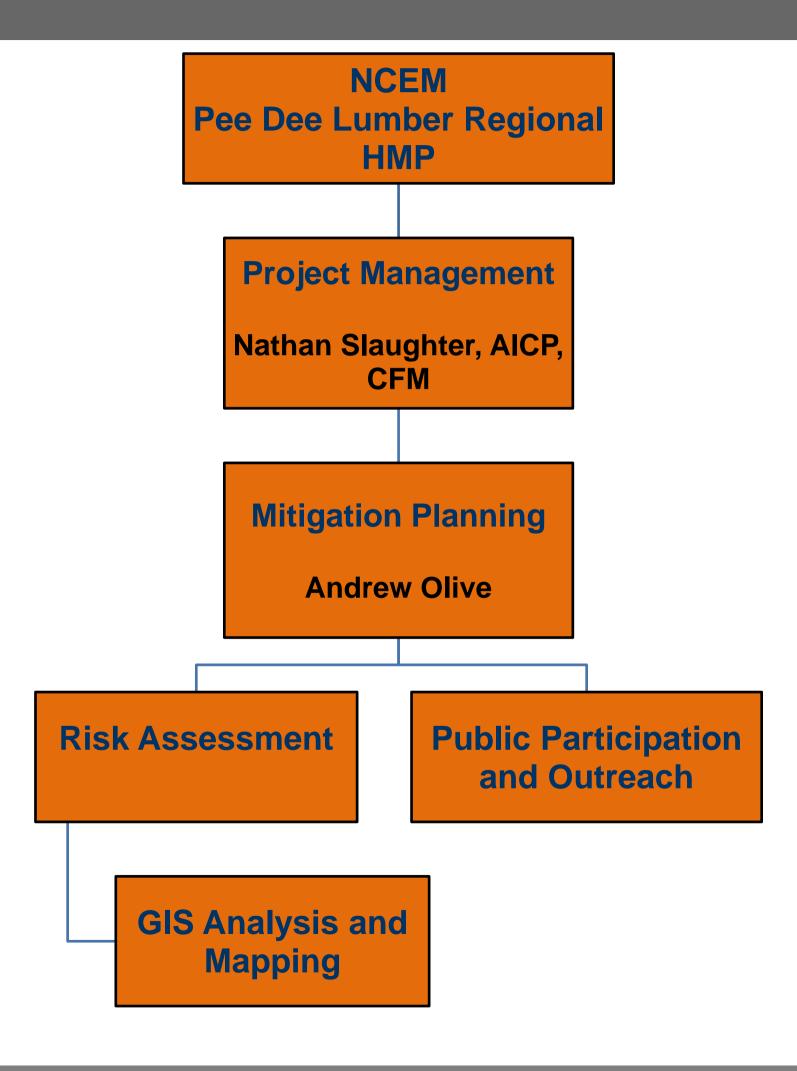
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PROJECT STAFFING





ROLES & RESPONSIBILITIES



ESP Associates, Inc.

- Technical Assistance
 - Planning guidance
 - State and federal compliance
- Data Collection & Analysis
 - Risk assessment
 - Capability assessment
 - Summarize results / report findings
- Facilitate HMP meetings, workshops and open public meetings
- Plan Preparation

County Leads

- Active participation in planning process
 - Data collection and exchange
 - Public awareness and stakeholder involvement
 - Arrange and host HMP meetings
 - Mitigation strategy development
 - Plan review & feedback
- Plan Adoption
- Project management
 - Central point of contact
 - Communication and coordination with participating jurisdictions, NCEM and FEMA

- **Participating Jurisdictions**
- Active participation in planning process
 - Data collection and exchange
 - Public awareness and stakeholder involvement
 - Attend HMPT meetings
 - -Mitigation strategy development
 - Plan review & feedback
- Plan Adoption

PUBLIC SURVEY

- Used to collect input from citizens and other stakeholders that aren't able to actively participate in the planning process. The survey will be available in hard copy and online formats.
- Survey is live!
- https://s.surveyplanet.com/eiFGJpqrW
- Please advertise on County and/or Municipal websites, Facebook, Twitter, etc so we can ensure good participation

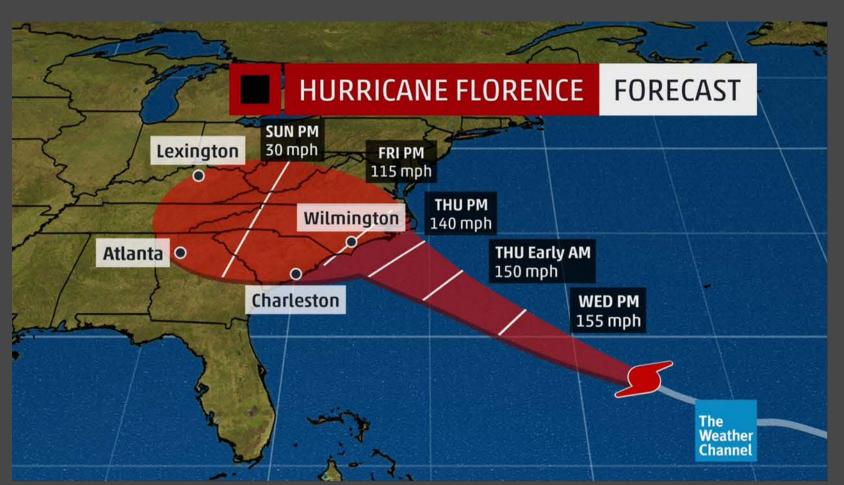
NEXT STEPS

- Determine members to participate on the Hazard Mitigation Planning Team
- Schedule Hazard Mitigation Planning Team meeting
- Initiate data collection efforts We'll need GIS data (critical facility locations, parcels, building footprints, townships)
- Begin public outreach

QUESTIONS, ISSUES OR CONCERNS

- Nathan Slaughter
 - -(919)415-2726
 - nslaughter@espassociates.com
- Andrew Olive
 - -(919)415-2757
 - aolive@espassociates.com

PEE DEE LUMBER REGIONAL HAZARD MITIGATION PLAN KICKOFF MEETING







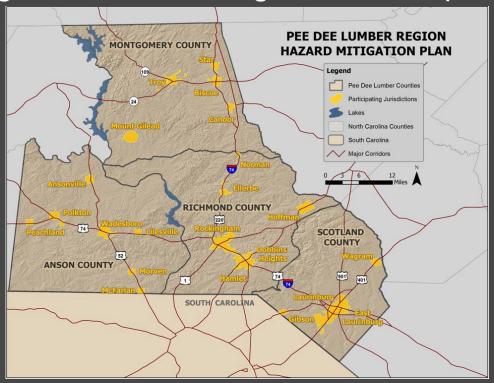


Pee Dee Lumber Regional Hazard Mitigation Plan Update | Kickoff Meeting



Pee Dee Lumber

Regional Hazard Mitigation Plan Update



4 Counties 22 Communities 1 Effort, 1 Plan



Mitigation Strategy Meeting February 10, 2022

AGENDA

-		. •	4 -	
-	Introc	luctions –	1 6	minutes
-1		IIIC 1 ICH IS —		111111111111111111111111111111111111111
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- II. Mitigation Recap 10 minutes
- III. Project Overview 10 minutes
- IV. Risk Assessment Findings 25 minutes
- V. Capability Assessment Findings 15 minutes
- VI. Mitigation Strategy 20 minutes
- VII. Public Survey Results 10 minutes
- VIII. Plan Maintenance 5 minutes
- IX. Next Steps 10 minutes

INTRODUCTIONS

ESP Associates, Inc.

- Nathan Slaughter, AICP, CFM Project Manager
- Andrew Olive Lead Planner
- Hannah DeLude Planner

County Leads

- Bob Smith, Director of Emergency Services Richmond County
- Robbie Smith, Director of Emergency Services Montgomery County
- Rodney Diggs, Emergency Services Chief/Fire Marshal Anson County
- Robert Sampson, Emergency Management Coordinator Scotland County

NCEM

- Benjamin Watkins Area Coordinator
- Carl Baker Hazard Mitigation Planner
- John Crew, CFM Hazard Mitigation Manager
- John Mello, CFM Mitigation Specialist

PARTICIPATING JURISDICTIONS



Anson County	Richmond County		
Ansonville	Dobbins Heights		
Lilesville	Ellerbe		
McFarlan	Hamlet		
Morven	Hoffman		
Peachland	Norman		
Polkton	Rockingham		
Wadesboro			
Montgomery County	Scotland County		
Biscoe	East Laurinburg		
Candor	Gibson		
Mount Gilead	Laurinburg		
Star	NA/2 (200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200		
Troy	Wagram		

MITIGATION REFRESHER





"mit-i-gate"

1: to cause to become less harsh or hostile.

2: to make less severe or painful.



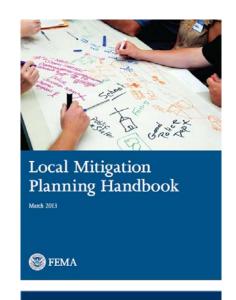
Hazard Mitigation

Any sustained action taken to reduce or eliminate the longterm risk to human life and property from hazards.

DISASTER MITIGATION ACT OF 2000



- Revitalized Federal Planning Requirements
 - State and Local Hazard Mitigation Plans
- Federal Grant Funding Eligibility
 - Hazard Mitigation Grant Program (HMGP)
 - Flood Mitigation Assistance (FMA)
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- DMA 2000 is intended to facilitate cooperation between state and local authorities on risk reduction measures and expedite funding allocation







NC SENATE BILL 300



- Passed in June of 2001, amends the North Carolina Emergency Management Act (166A)
 - Requires local hazard mitigation plans in order to maintain eligibility for Public Assistance (PA) for state-declared disasters

GENERAL ASSEMBLY OF NORTH CAROLINA SESSION 2001

SESSION LAW 2001-214 SENATE BILL 300

AN ACT TO AMEND THE LAWS REGARDING EMERGENCY MANAGEMENT AS RECOMMENDED BY THE LEGISLATIVE DISASTER RESPONSE AND RECOVERY COMMISSION.

KEY OBJECTIVES



- Coordinate between four counties to update the regional HMP
- Complete update of existing plan to demonstrate progress and reflect current conditions
- Increase public awareness and education
- Maintain grant eligibility for participating jurisdictions
- Update plan in accordance with Community Rating System (CRS) requirements
- Maintain compliance with State and Federal requirements
- Current plan expires March 22, 2023

PROJECT SCHEDULE

	Month									
Project Tasks	JULY	AUG	SEP	ост	NOV	DEC	JAN	FEB	MAR	APR 2022- APR 2023
Planning Process										
Risk Assessment										
Capability Assessment										
Mitigation Strategy										
Plan Maintenance Procedures										
Documentation										
Meetings										
Kickoff Meeting	X									
Regional Hazard Mitigation Team Meetings								(x)		
Open Public Meetings								X		
Milestones										
Presentation of Draft Risk Assessment to Planning Team								X		
Presentation of Draft Risk Assessment to NCEM								X		
Submission of Draft Plan to Planning Team									X	
Submission of Draft Plan to NCEM/FEMA									X	
Completion of Final Plan/Conditional FEMA Approval										X
Local Adoption of Final Plan										X
Submission of Final Plan to NCEM/FEMA										X

PROJECT TASKS



- 1. Planning Process
- 2. Risk Assessment
- 3. Capability Assessment
- 4. Mitigation Strategy
- 5. Plan Maintenance
- 6. Documentation



RISK ASSESSMENT



- Hazard Identification and Analysis
 - Detailed profiles for all natural hazards
 - Hazard description
 - Historical occurrences
 - Known hazard boundaries
 - Priority Risk Index (PRI)
- Vulnerability Assessment
 - Asset inventory (exposure)
 - Loss estimates
- Development Trends and Implications
- GIS Data Inventory

RISK ASSESSMENT FINDINGS

44 CFR Requirement

44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

- Hazard Identification
- Hazard Profiles
- Hazard Vulnerability Assessment

STATE OF NC HAZARD MITIGATION PLAN



Identified and reviewed by:

- Subject matter experts (SME)
- Representatives from NCEM
- Risk Management Coordinating Council

Natural Hazards	Technological Hazards
Flooding	Hazardous Substances
Hurricanes and Coastal Hazards	 Hazardous Materials
Severe Winter Weather	Hazardous Chemicals
Excessive Heat	Oil Spill
Earthquakes	Radiological Emergency – Fixed Nuclear Facilities
Wildfires	Terrorism
Dam Failures	 Chemical
Drought	 Biological
Tornadoes/Thunderstorms	 Radiological
Geological	 Nuclear
 Landslides/Rock Fall 	 Explosive
Sinkholes	Cyber
Infectious Disease	Electromagnetic Pulse

NATURAL HAZARDS COMPARISON



NC HMP		

Hurricane/Coastal Hazards

Severe Winter Weather

Excessive Heat

Earthquakes

Wildfire

Flood

Dam Failure

Drought

Tornadoes/Thunderstorm

Geological

-Landslide/Rock Fall

-Sinkholes

Infectious Disease

Pee Dee Lumber HMP

Flood

Hurricane/Tropical Storm

Severe Winter Weather

Extreme Heat

Earthquakes

Wildfire

Dam Failure

Drought

Tornadoes

Severe Thunderstorms

Hailstorm

Lightning

Geological

-Landslide

Pee Dee Lumber Regional Hazard Mitigation Plan Update | Mitigation Strategy Meeting

TECHNOLOGICAL/OTHER HAZARD COMPARISON



NC HMP

Hazardous Substances

- -HAZMAT
- -Hazardous Chemicals
- -Oil Spills

Radiological Emergency – Fixed Nuclear Facilities

Terrorism

- -Chemical
- -Biological
- -Radiological
- -Nuclear
- -Explosive

Cyber

Electromagnetic Pulse

Pee Dee Lumber HMP

Hazardous Materials Incident

Terrorism

Cyber

Electromagnetic Pulse

A COUPLE OF CAVEATS



1. We utilize Best Available Data

Useful, but events are often under-reported

2. Keep the end goal in sight

- The risk assessment's purpose is to compare hazards and determine which should be the focus of your mitigation actions
- The detailed numbers are informative, but remember the big picture

3. This is YOUR risk assessment

– The data we provide is beneficial, but YOU live here! Your recommendations for adjustments are welcomed and encouraged!

HAZARD EVENTS SINCE PREVIOUS PLAN



Hazard Type*	Number of Reported Events in Anson County	Number of Reported Events in Montgomery County	Number of Reported Events in Richmond County	Number of Reported Events in Scotland County
Cold/Wind Chill	0	0	0	0
Flash Flood	9	3	5	5
Flood	1	1	1	1
Hail	1	3	2	2
Heavy Snow	0	0	0	0
High Wind	0	0	0	1
Lightning	0	0	0	0
Strong Wind	3	0	2	2
Thunderstorm Wind	36	36	29	24
Tornado	2	0	0	0
Tropical Storm	3	3	3	4
Winter Storm	2	5	4	3
Winter Weather	4	4	4	4
TOTAL NUMBER OF REPORTED EVENTS	61	55	50	46

PRESIDENTIAL DISASTER DECLARATIONS



Since the last plan (2018)

- DR-4393 Hurricane Florence
- DR-4412 TS Michael
- DR-4487 COVID-19 Pandemic
 - March 25, 2020



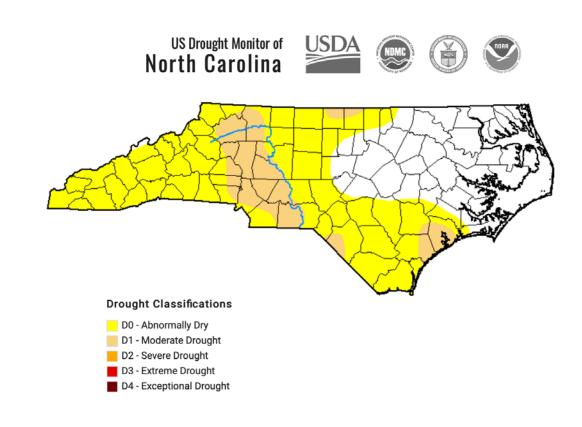
Hurricane **Florence Damage** at St. Andrews University Source: The Laurinburg Exchange



Richmond County - Hurricane Florence Source: The Richmond Observer

DROUGHT

- No records of drought in the NCEI database
 - Primarily 8 long-term events
 between 2000 to 2019
 - All events were regional (multiple counties affected)
- Losses are difficult to track
- Future occurrences are likely



DROUGHT EVENTS

Year	Anson County	Montgomery County	Richmond County	Scotland County
2000	Severe Drought	Severe Drought	Severe Drought	Moderate Drought
2001	Extreme Drought	Severe Drought	Extreme Drought	Severe Drought
2002	Exceptional Drought	Exceptional Drought	Exceptional Drought	Exceptional Drought
2003	Abnormally Dry	Abnormally Dry	Abnormally Dry	Abnormally Dry
2004	Moderate Drought	Moderate Drought	Moderate Drought	Abnormally Dry
2005	Severe Drought	Severe Drought	Severe Drought	Moderate Drought
2006	Moderate Drought	Severe Drought	Moderate Drought	Moderate Drought
2007	Exceptional Drought	Exceptional Drought	Exceptional Drought	Exceptional Drought
2008	Exceptional Drought	Exceptional Drought	Exceptional Drought	Exceptional Drought
2009	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2010	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2011	Severe Drought	Severe Drought	Severe Drought	Severe Drought
2012	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2013	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2014	Abnormally Dry	Abnormally Dry	Abnormally Dry	Abnormally Dry
2015	Moderate Drought	Abnormally Dry	Abnormally Dry	Abnormally Dry
2016	Moderate Drought	Abnormally Dry	Abnormally Dry	Abnormally Dry
2017	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2018	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought
2019	Moderate Drought	Moderate Drought	Moderate Drought	Moderate Drought

EXCESSIVE HEAT

- NCEI reported two excessive heat events
 - July 22, 1998
 - Maximum Temperatures between 98 103 degrees
 Fahrenheit
 - July 23, 1999
 - Two deaths related to heat exposure in Scotland County

MAXIMUM TEMPERATURE RECORDED FOR THE PEE DEE LUMBER REGION

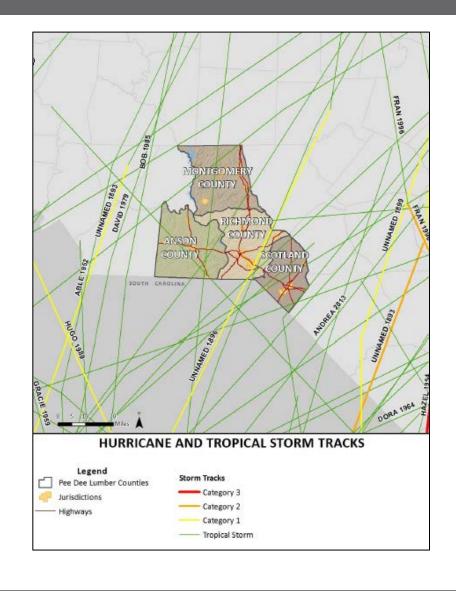
	Anson County	Montgomery County	Richmond County	Scotland County
Max Temp. Recorded (°F)	107 °F	108 °F	108 °F	107 °F

Source: NC State Climate Office

HURRICANE AND COASTAL HAZARDS

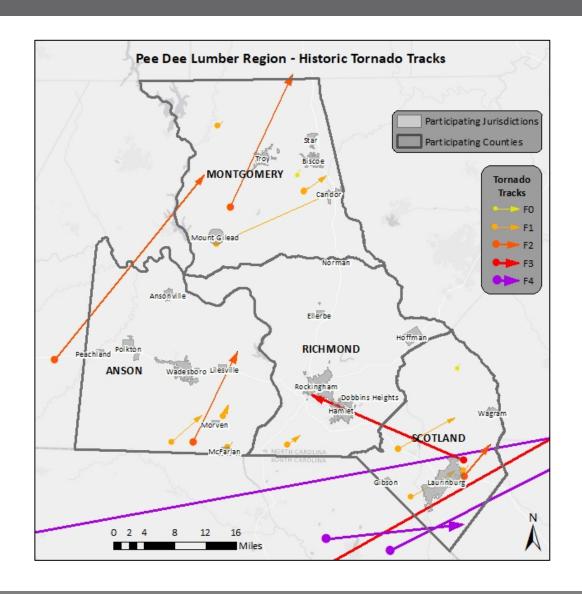


- 64 storm tracks have come within
 75 miles of the region since 1896
 - 10 storms in the region
- Remnants are of great concern
 - Flooding, landslides
- Recent Disaster Declarations
 - Tropical Storm Frances 2004
 - Hurricane Matthew 2016
 - Hurricane Florence 2018
 - Tropical Storm Michael 2019
- Future occurrences are highly likely



TORNADOES

- 28 recorded events since 1950
 - 0 deaths, 36 injuries
 - Over \$15.5 million in property damage
- Greatest magnitude = F4
- Uniform exposure across entire region
- Future occurrences are *likely*



TORNADO EVENTS

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	6	0	5	\$6,125,000
Ansonville	0	0	0	\$0
Lilesville	0	0	0	\$0
McFarlen	0	0	0	\$0
Morven	0	0	0	\$0
Peachland	0	0	0	\$0
Polkton	0	0	0	\$0
Wadesboro	1	0	0	\$0
Unincorporated Area	5	0	5	\$6,125,000
Montgomery County	7	0	7	\$2,777,500
Biscoe	0	0	0	\$0
Candor	0	0	0	\$0
Mount Gilead	0	0	0	\$0
Star	1	0	0	\$0
Troy	0	0	0	\$0
Unincorporated Area	6	0	7	\$2,777,500

TORNADO EVENTS (CONTD.)

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Richmond County	4	0	0	\$350,030
Dobbins Heights	0	0	0	\$0
Ellerbe	0	0	0	\$0
Hamlet	0	0	0	\$0
Hoffman	0	0	0	\$0
Norman	0	0	0	\$0
Rockingham	0	0	0	\$0
Unincorporated Area	4	0	0	\$350,030
Scotland County	11	0	24	\$6,275,250
East Laurinburg	0	0	0	\$0
Gibson	0	0	0	\$0
Laurinburg	1	0	0	\$0
Wagram	0	0	0	\$0
Unincorporated Area	10	0	24	\$6,275,250
Pee Dee Lumber Regional Total	28	0	36	\$15,527,780

SEVERE THUNDERSTORMS AND HIGH WINDS

- 530 severe thunderstorm events recorded since 1950
 - One disaster declaration in 1984
 - 1 deaths, 6 injuries
 - Over \$4.4 million in property damage
- Uniform exposure across the entire region
 - High winds
- Future occurrences are highly likely

THUNDERSTORMS AND HIGH WINDS, CONTINUED



Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	159	1	2	\$206,800
Ansonville	14	0	0	\$7,500
Lilesville	4	0	0	\$7,500
McFarlen	3	0	0	\$10,000
Morven	5	0	0	\$0
Peachland	15	0	0	\$52,000
Polkton	10	0	0	\$2,000
Wadesboro	31	0	0	\$65,000
Unincorporated Area	128	1	2	\$62,800
Montgomery County	124	0	0	\$2,455,500
Biscoe	7	0	0	\$18,000
Candor	7	0	0	\$15,000
Mount Gilead	17	0	0	\$0
Star	5	0	0	\$17,500
Troy	24	0	0	\$152,000
Unincorporated Area	64	0	0	\$2,253,000

THUNDERSTORMS AND HIGH WINDS, CONTINUED



Richmond County	132	0	0	\$600,000
Dobbins Heights	0	0	0	\$0
Ellerbe	21	0	0	\$2,000
Hamlet	7	0	0	\$282,500
Hoffman	4	0	0	\$0
Norman	1	0	0	\$0
Rockingham	24	0	0	\$82,500
Unincorporated Area	75	0	0	\$233,000
Scotland County	115	0	4	\$1,187,500
East Laurinburg	2	0	0	\$0
Gibson	6	0	0	\$5,000
Laurinburg	21	0	0	\$92,500
Wagram	8	0	0	\$8,000
Unincorporated Area	78	0	4	\$1,082,000
Pee Dee Lumber Regional Total	530	1	6	\$4,449,800

HAILSTORMS

- 183 recorded events
 - -1959-2019
 - -Over \$5.27 million in property damage
 - -4.5" hailstones reported
- Similar exposure across entire region
- Future occurrences are likely

HAILSTORM EVENTS

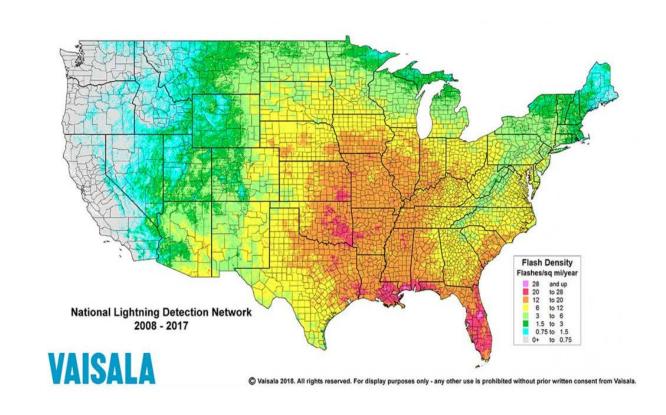
Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	49	0	0	\$0
Ansonville	9	0	0	\$0
Lilesville	2	0	0	\$0
McFarlen	0	0	0	\$0
Morven	2	0	0	\$0
Peachland	0	0	0	\$0
Polkton	2	0	0	\$0
Wadesboro	9	0	0	\$0
Unincorporated Area	25	0	0	\$0
Montgomery County	53	0	0	\$25,000
Biscoe	2	0	0	\$0
Candor	4	0	0	\$0
Mount Gilead	3	0	0	\$0
Star	1	0	0	\$0
Troy	13	0	0	\$25,000
Unincorporated Area	30	0	0	\$0

HAILSTORM EVENTS (CONTD.)

Richmond County	35	0	0	\$250,000
Dobbins Heights	0	0	0	\$0
Ellerbe	1	0	0	\$0
Hamlet	2	0	0	\$0
Hoffman	2	0	0	\$250,000
Norman	2	0	0	\$0
Rockingham	12	0	0	\$0
Unincorporated Area	16	0	0	\$0
Scotland County	46	0	0	\$5,000,000
East Laurinburg	2	0	0	\$0
Gibson	2	0	0	\$0
Laurinburg	17	0	0	\$0
Wagram	2	0	0	\$0
Unincorporated Area	23	0	0	\$5,000,000
Pee Dee Lumber Regional Total	183	0	0	\$5,275,000

LIGHTNING

- 7 recorded lightning events since 1996
 - \$300 thousand in property damages
- Uniform exposure across the region
- Future occurrences are highly likely



LIGHTNING EVENTS

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Anson County	2	0	0	\$85,000
Ansonville	0	0	0	\$0
Lilesville	0	0	0	\$0
McFarlen	1	0	0	\$75,000
Morven	0	0	0	\$0
Peachland	0	0	0	\$0
Polkton	0	0	0	\$0
Wadesboro	0	0	0	\$0
Unincorporated Area	1	0	0	\$10,000
Montgomery County	3	0	0	\$10,000
Biscoe	0	0	0	\$0
Candor	0	0	0	\$0
Mount Gilead	2	0	0	\$10,000
Star	0	0	0	\$0
Troy	1	0	0	\$0
Unincorporated Area	0	0	0	\$0

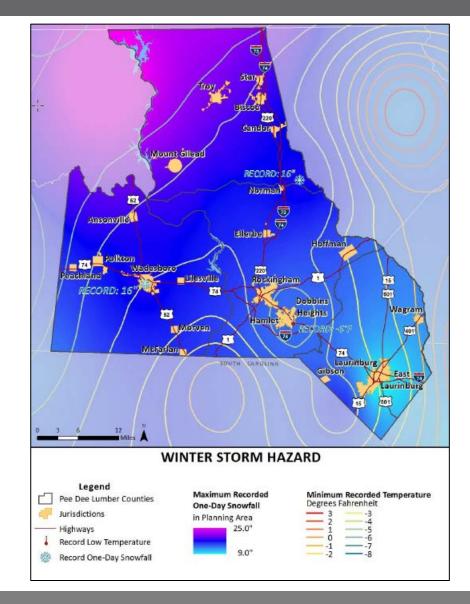
LIGHTNING EVENTS (CONTD.)

Location	Number of Occurrences	Deaths	Injuries	Property Damage (2020)
Richmond County	0	0	0	\$0
Dobbins Heights	0	0	0	0
Ellerbe	0	0	0	0
Hamlet	0	0	0	0
Hoffman	0	0	0	0
Norman	0	0	0	0
Rockingham	0	0	0	0
Unincorporated Area	0	0	0	0
Scotland County	2	0	0	\$205,000
East Laurinburg	1	0	0	\$200,000
Gibson	0	0	0	\$0
Laurinburg	0	0	0	\$0
Wagram	0	0	0	\$0
Unincorporated Area	1	0	0	\$5,000
Pee Dee Lumber Regional Total	7	0	0	\$300,000

SEVERE WINTER WEATHER



- 140 recorded winter weather events since 1993
 - Uniform exposure in the region
 - No deaths or injuries reported
- 4 Disaster Declarations
 - Blizzard of 1996
 - Winter Storm in 1996
 - Winter Storm in 2000
 - Severe Ice Storm in 2002
- Future occurrences are highly likely

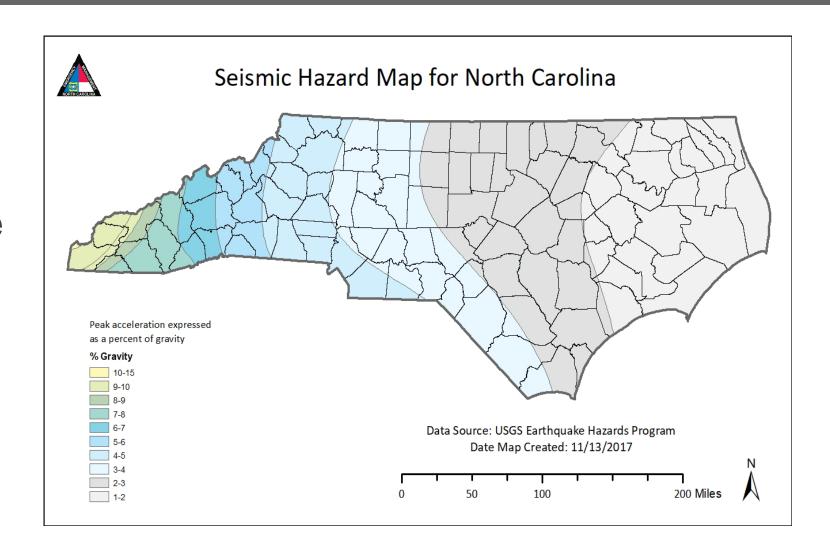


SEVERE WINTER WEATHER, EVENTS

Location	Number of Occurrences	Deaths/Injuries	Property Damage (2020)
Anson County	32	0/0	\$0
Montgomery County	41	0/0	\$0
Richmond County	35	0/0	\$0
Scotland County	32	0/0	\$0
PEE DEE LUMBER REGION TOTAL	140	0/0	\$0

EARTHQUAKE

- At least 14
 earthquakes have
 affected the Pee Dee
 Lumber region since
 1886
- Future occurrences are *possible*



EARTHQUAKE EVENTS – ANSON COUNTY



Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Ansonville	1	VI	
Lilesville	1	111	
McFarlen	1	IV	
Morven	1	IV	
Peachland	0		
Polkton	0		
Wadesboro	1	V	
Unincorporated Area	0		
Anson County	5	VI (strong)	<5.4

EARTHQUAKE EVENTS – MONTGOMERY COUNTY



Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Biscoe	0		
Candor	0		
Mount Gilead	0		
Star	0		
Troy	1	VII	
Unincorporated Area	0		
Montgomery County	1	VII (very strong)	<6.1

EARTHQUAKE EVENTS – RICHMOND COUNTY



Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Dobbins Heights	0		
Ellerbe	2	IV	
Hamlet	1	IV	
Hoffman	0		
Norman	0		
Rockingham	1	V	
Unincorporated Area	0		
Richmond County	5	V (slightly strong)	<4.8

EARTHQUAKE EVENTS – SCOTLAND COUNTY

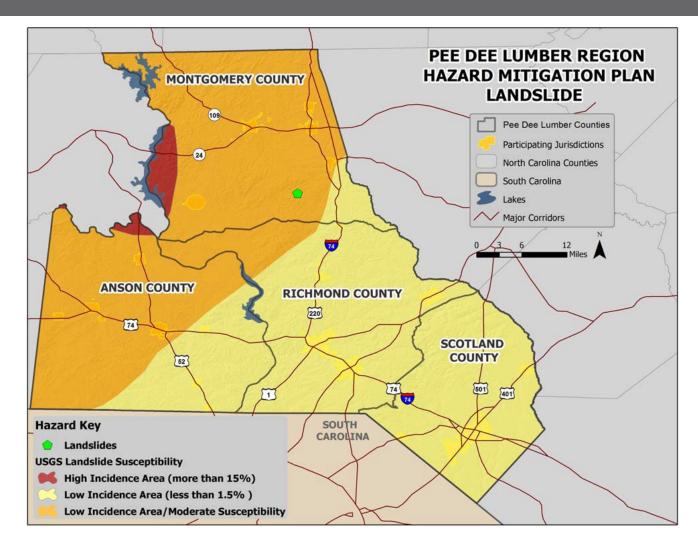


Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
East Laurinburg	0		
Gibson	2	III	
Laurinburg	1	VI	
Wagram	0		
Unincorporated Area	0		
Scotland County	3	VI (strong)	<5.4

GEOLOGICAL - LANDSLIDE



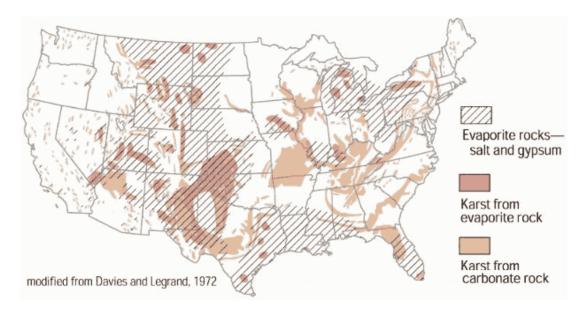
- Part of the region is susceptible
 - Some areas more than others
 - Only one occurrence in the region
- Future occurrences are possible



GEOLOGICAL - SINKHOLE

>

- Common in the western part of the state
- One occurrence in the region
 - Sinkhole along Highway 74 in Wadesboro caused by rain event
- Future occurrences are unlikely







Source: WCNC

GEOLOGICAL - EROSION



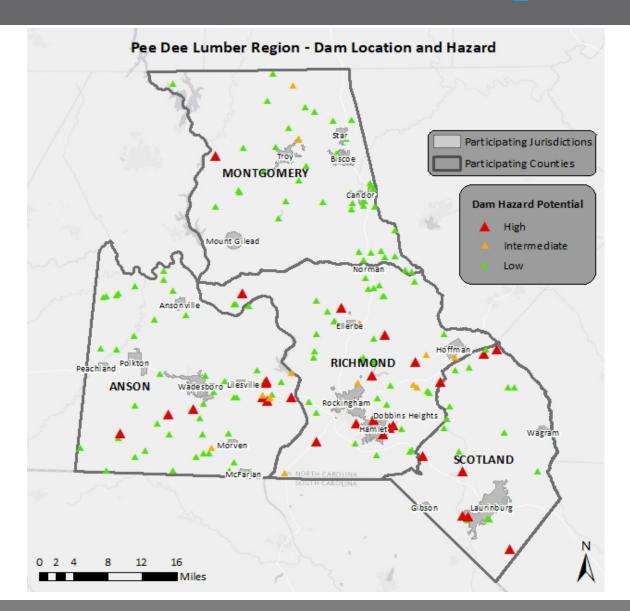
- Occurs along banks of rivers and streams
- Ranked "low" in the previous Anson and Montgomery County hazard mitigation plan
- Typically caused by flash flooding events

DAM FAILURE

- 29 high hazard dams in the region
- 4 significant breaches reported
- Future occurrences are *unlikely*

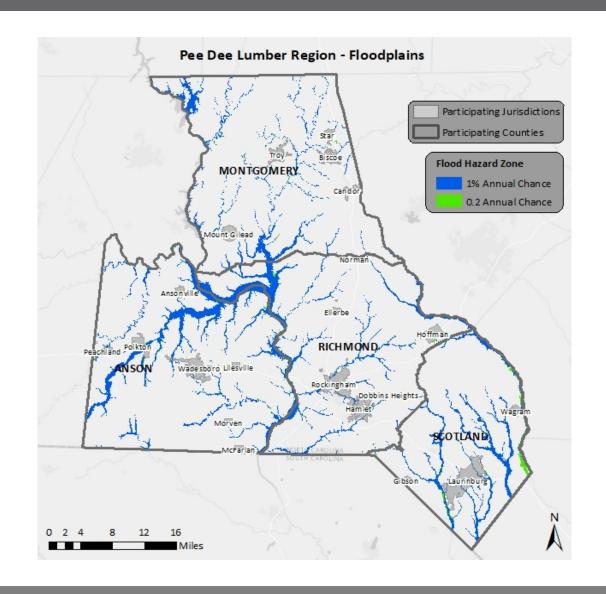
Location	Number of High Hazard Dams
Anson County	8
Montgomery County	1
Richmond County	12
Scotland County	8

Source: North Carolina Division of Energy, Mineral, and Land Resources



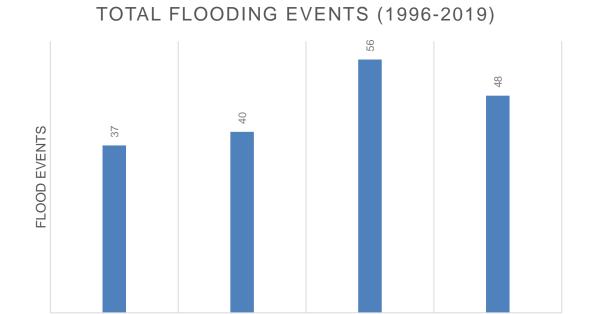


- Since 1950, NCEI records:
 - 3 deaths
 - Over \$36.5 million in property damage
- NFIP Losses:
 - 68 reported losses since 1970
 - Approximately \$614 thousand in claims
- Repetitive Loss:
 - 2 properties in Pee Dee Lumber Region as of 2019, 4 losses
 - Over \$47 thousand in total payments
- Future occurrences are likely



FLOOD EVENTS

According to NOAA, a total of <u>181</u> flooding events have occurred in the Pee Dee Lumber Region between the years 1996 and 2019.



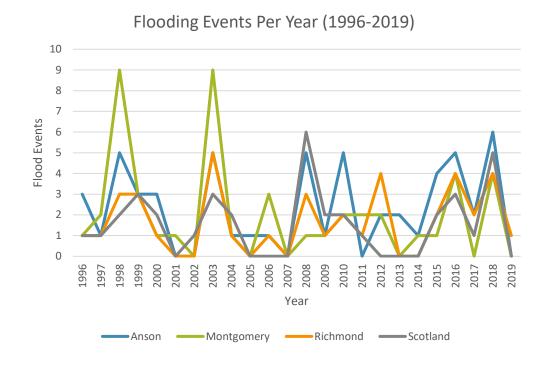
COUNTY

RICHMOND

SCOTLAND

ANSON

MONTGOMERY



FLOOD – NFIP STATS

Location	Number of Policies	Flood Losses	Claims Payments
Anson County	7	3	\$21,525
Ansonville	*	*	*
Lilesville	0	0	\$0
McFarlan	*	*	*
Morven	*	*	*
Peachland	0	0	\$0
Polkton	0	0	\$0
Wadesboro	4	1	\$6,580
Unincorporated Area	3	2	\$14,945
Montgomery County	23	56	\$460,929
Biscoe	*	*	*
Candor	*	*	*
Mount Gilead	*	*	*
Star	*	*	*
Troy	2	0	\$0
Unincorporated Area	21	56	\$460,929

FLOOD – NFIP STATS

Location	Number of Policies	Flood Losses	Claims Payments
Richmond County	76	8	\$99,904
Dobbins Heights	*	*	*
Ellerbe	*	*	*
Hamlet	4	1	\$2,369
Hoffman	*	*	*
Norman	*	*	*
Rockingham	29	6	\$69,601
Unincorporated Area	43	1	\$27,934
Scotland County	75	1	\$32,327
East Laurinburg	3	0	\$0
Gibson	*	*	*
Laurinburg	61	1	\$32,327
Wagram	*	*	*
Unincorporated Area	11	2	\$0
PEE DEE LUMBER REGION TOTAL	181	68	\$614,685

FLOOD – NFIP STATS – ANSON COUNTY



Location	Number of Policies	Flood Losses	Claims Payments	
Anson County	7	3	\$21,525	
Ansonville	*	*	*	
Lilesville	0	0	\$0	
McFarlan	*	*	*	
Morven	*	*	*	
Peachland	0	0	\$0	
Polkton	0	0	\$0	
Wadesboro	4	1	\$6,580	
Unincorporated Area	3	2	\$14,945	

Source: FEMA NFIP Reports – 09/30/2018

FLOOD VULNERABILITY – ANSON COUNTY



Location	Pre-Firm Buildings		Residential Buildings at Risk		Commercial Buildings at Risk		Public Buildings at Risk		Total Buildings at Risk	
	at Risk	Number	Damage s	Number	Damages	Number	Damages	Number	Damages	
Anson County	22	19	\$32,087	5	\$11,543,96 1	0	0	24	\$11,576,048	
Ansonville	0	0	\$0	0	\$0	0	\$0	0	\$0	
Lilesville	0	0	\$0	0	\$0	0	\$0	0	\$0	
McFarlan	0	0	\$0	0	\$0	0	\$0	0	\$0	
Morven	4	3	\$4,366	1	\$9,526	0	\$0	4	\$13,892	
Peachland	0	0	\$0	0	\$0	0	\$0	0	\$0	
Polkton	13	11	\$17,613	2	\$38,514	0	\$0	13	\$56,127	
Wadesboro	3	1	\$778	2	\$11,495,92 1	0	\$0	3	\$11,496,699	
Unincorporated Area	2	4	\$9,330	0	\$0	0	\$0	4	\$9,330	

FLOOD – NFIP STATS – MONTGOMERY COUNTY



Location	Number of Policies	Flood Losses	Claims Payments
Montgomery County	23	56	\$460,929
Biscoe	*	*	*
Candor	*	*	*
Mount Gilead	*	*	*
Star	*	*	*
Troy	2	0	\$0
Unincorporated Area	21	56	\$460,929

Source: FEMA NFIP Reports - 09/30/2018

FLOOD VULNERABILITY – MONTGOMERY COUNTY



Pre-Firm Location Buildings		Residential Buildings at Risk		Commercial Buildings at Risk		Public Buildings at Risk		Total Buildings at Risk	
	at Risk	Number	Damages	Numbe r	Damage s	Number	Damages	Number	Damages
Biscoe	2	2	\$1,927	0	\$0	0	\$0	2	\$1,927
Candor									
Mount Gilead	2	2	\$1,489	0	\$0	0	\$0	2	\$1,489
Star	1	1	\$1,121	0	\$0	0	\$0	1	\$1,121
Troy	0	0	\$0	0	\$0	0	\$0	0	\$0
Montgomery County	11	15	\$100,432	3	\$77,391	0	\$0	18	\$177,823

FLOOD – NFIP STATS – RICHMOND COUNTY



Location	Number of Policies	Flood Losses	Claims Payments
Dobbins Heights	*	*	*
Ellerbe	*	*	*
Hamlet	4	1	\$2,369
Hoffman	*	*	*
Norman	*	*	*
Rockingham	29	6	\$69,601
Unincorporated Area	43	1	\$27,934
Richmond County	76	8	\$99,904

Source: FEMA NFIP Reports - 09/30/2018

FLOOD VULNERABILITY - RICHMOND COUNTY



Location	Pre-Firm		Residential Buildings at Risk		Commercial Buildings at Risk		Public Buildings at Risk		Total Buildings at Risk	
Location	Building s at Risk	Numbe r	Damage s	Numbe r	Damage s	Numbe r	Damage s	Numbe r	Damages	
Dobbins Heights	0	0	\$0	0	\$0	0	\$0	0	\$0	
Ellerbe	0	0	\$0	0	\$0	0	\$0	0	\$0	
Hamlet	17	7	\$88,726	6	\$209,878	4	\$98,427	17	\$397,030	
Hoffman	0	0	\$0	0	\$0	0	\$0	0	\$0	
Norman	0	0	\$0	0	\$0	0	\$0	0	\$0	
Rockingham	107	51	\$304,606	44	\$1,325,21 0	10	\$460,842	105	\$2,090,659	
Unincorporate d Area	38	17	\$58,155	21	\$41,380	0	\$0	38	\$99,535	
Richmond County	162	75	\$451,487	71	\$1,576,468	14	\$559,269	160	\$2,587,224	

FLOOD – NFIP STATS – SCOTLAND COUNTY



Location	Number of Policies	Flood Losses	Claims Payments
East Laurinburg	3	0	\$0
Gibson	*	*	*
Laurinburg	61	1	\$32,327
Wagram	*	*	*
Unincorporated Area	11	2	\$0
Scotland County	75	1	\$32,327

Source: FEMA NFIP Reports - 09/30/2018

FLOOD VULNERABILITY – SCOTLAND COUNTY

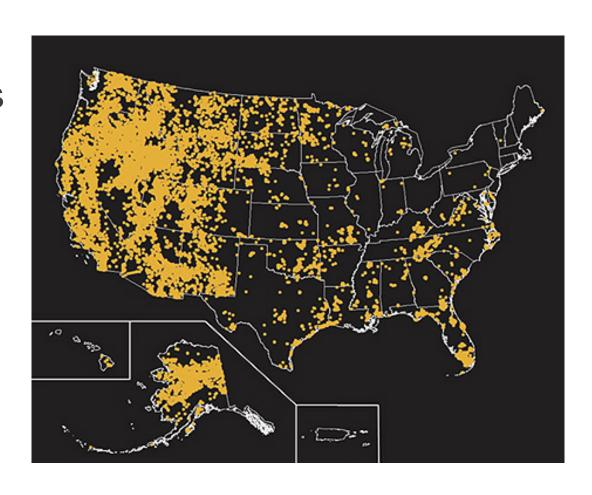


Location	Pre-Firm Location Buildings at Risk	Residential Buildings at Risk		Commercial Buildings at Risk		Public Buildings at Risk		Total Buildings at Risk	
		Numbe r	Damage s	Number	Damage s	Numbe r	Damages	Numbe r	Damages
East Laurinburg	22	22	\$140,915	0	\$0	0	\$0	22	\$140,915
Gibson	0	0	\$0	0	\$0	0	\$0	0	\$0
Laurinburg	72	67	\$827,441	7	\$223,236	0	\$0	74	\$1,050,678
Wagram	0	0	\$0	0	\$0	0	\$0	0	\$0
Unincorporated Area	33	34	\$130,717	5	\$147,900	1	\$33,256	40	\$311,873
Scotland County	127	123	\$1,099,073	12	\$371,136	1	\$33,256	136	\$1,503,466



Wildfire Vulnerability

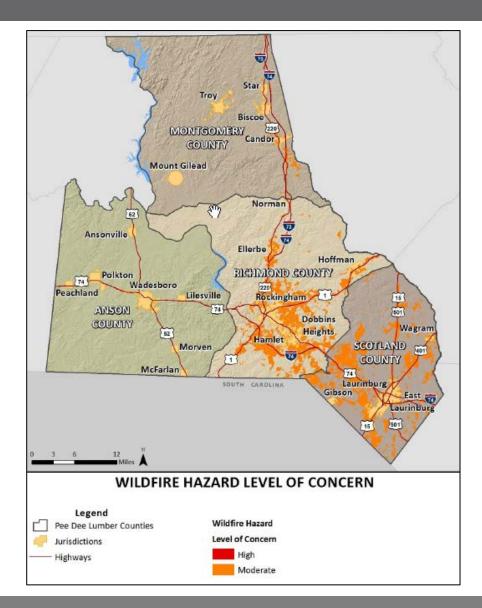
- Map represents fires > 250 acres
- Relative Risk of Wildfire
 - Larger fires possible
- 10-year averages (2008-2017)
 - 64,565 Wildfires
 - 6,571,242 Acres
 - National Interagency Fire Center



WILDFIRE, CONTINUED

>

- Wildfire Urban
 Interface Risk Index
 - Rating of potential impact of wildfire on people and their homes
- Future occurrences are likely



WILDFIRE EVENTS

	Anson	County	Montgom	ery County	Richmon	d County	Scotland	I County
Year	Number of Fires	Number of Acres Burned	Number of Fires	Number of Acres Burned	Number of Fires	Number of Acres Burned	Number of Fires	Number of Acres Burned
2001	68	391	44	226	142	460	175	1323
2002	26	238	36	258	82	363	154	1664
2003	10	52	9	41	38	172	57	785
2004	24	272	40	82	102	686	90	637
2005	38	170	26	56	106	579	96	1518
2006	39	125	37	87	99	704	96	1086
2007	40	83	39	118	93	448	91	1477
2008	42	303	46	191	49	229	64	866
2009	31	89	24	68	58	99	39	324
2010	45	154	33	154	120	489	62	1046
2011	32	165	25	155	113	588	86	609
2012	27	111	21	73	89	543	61	1251
2013	34	62	19	247	75	248	16	59
2014	29	83	30	73	74	1040	51	1438
2015	30	198	22	71	26	199	0	0
2016	14	22	46	392	94	711	54	2681
2017	30	72	19	76	78	1111	29	1650
2018	15	51	6	16	12	261	10	2227

INFECTIOUS DISEASE



- Hazard first assessed in NCHMP 2018
- A recent hazard of concern
- Increasing risk/vulnerability with increasing populations
- Other historical occurrences include vector-borne diseases (Zika) and influenza

INFECTIOUS DISEASE, CONTINUED

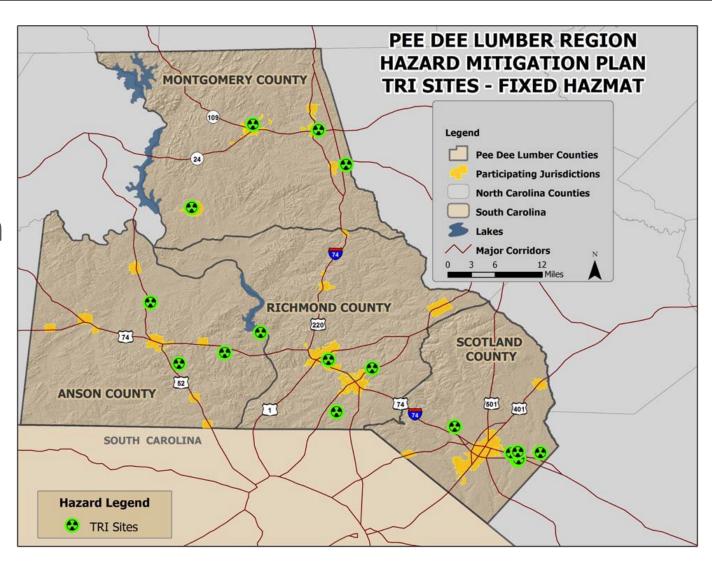
- One disaster declaration in the region
 - COVID-19 Pandemic on March 24, 2020
- NC DHHS reported 34,500 cases in region as of February 2022

Location	Number of Cases	Number of Deaths*
Anson County	6,180	88
Montgomery County	6,944	115
Richmond County	11,828	170
Scotland County	9,548	118
Pee Dee Lumber Region Total	34,500	491

HAZARDOUS SUBSTANCES



- 190 serious events reported since 1970
 - PHMSA
- 57 TRI Facilities in the region
 - EPA
- Future occurrences are possible



HAZARDOUS SUBSTANCES EVENTS – ANSON COUNTY



Location	Number of Occurrences	Deaths/Injuries	Costs
Ansonville	0	0/0	\$0
Lilesville	4	0/0	\$25
McFarlen	0	0/0	\$0
Morven	0	0/0	\$0
Peachland	1	0/0	\$0
Polkton	1	0/0	\$0
Wadesboro	9	0/0	\$108,460
Unincorporated Area	5	0/0	\$13,540
Anson County	20	0/0	\$122,025

HAZARDOUS SUBSTANCES EVENTS – MONTGOMERY COUNTY



Location	Number of Occurrences	Deaths/Injuries	Costs
Biscoe	2	0/0	\$3,000
Candor	0	0/0	\$0
Mount Gilead	4	0/0	\$895,400
Star	0	0/0	\$0
Troy	4	0/0	\$240
Unincorporated Area	3	0/0	\$80
Montgomery County	13	0/0	\$898,720

HAZARDOUS SUBSTANCES EVENTS – RICHMOND COUNTY



Location	Number of Occurrences	Deaths/Injuries	Costs
Dobbins Heights	0	0/0	\$0
Ellerbe	0	0/0	\$0
Hamlet	124	0/0	\$119,973
Hoffman	1	0/0	\$22,200
Norman	0	0/0	\$0
Rockingham	10	0/0	\$41,800
Unincorporated Area	0	0/0	\$0
Richmond County	135	0/0	\$183,973

HAZARDOUS SUBSTANCES EVENTS – SCOTLAND COUNTY



Location	Number of Occurrences	Deaths/Injuries	Costs
East Laurinburg	0	0/0	\$0
Gibson	0	0/0	\$0
Laurinburg	22	0/0	\$6,120
Wagram	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Scotland County	22	0/0	\$6,120

TERROR THREAT

Examples

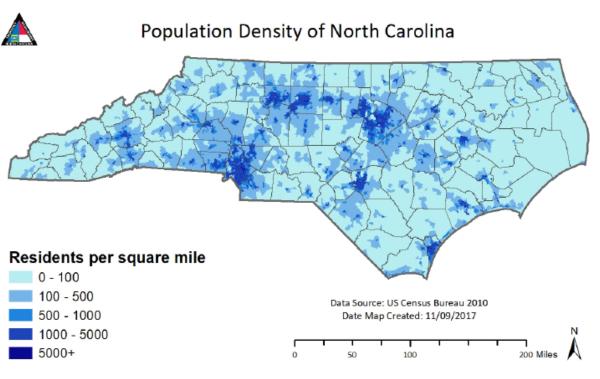
- Assassinations/Armed Attack
- Kidnapping
- Hijacking
- Bomb Scares and Bombing
- Cyber Attack
- Chemical Agent
- Biological Agent
- Nuclear Bomb
- Radiological Agent
- No reported events
- Future occurrences are unlikely

Threat Level	Description
SEVERE	Severe Risk of Terrorist Attacks
HIGH	High Risk of Terrorist Attacks
ELEVATED	Significant Risk of Terrorist Attacks
GUARDED	General Risk of Terrorist Attacks
LOW	Low Risk of Terrorist Attacks

TERROR THREAT, CONTINUED



All areas are vulnerable to terrorism, but terror threats tend to target more densely populated areas



al Infrastructure Sectors
Energy
Government Facilities
Healthcare and Public Health
Information Technology
National Monuments and Icons
Nuclear Reactors, Materials, and Waste
Postal and Shipping
Transportation Systems
Water



- NC Department of Information Technology specializes in cybersecurity
- "Non-payment/non delivery" highest number of cybercrimes in NC

Crime Type by Victim Count			
Crime Type	Victim Count	Crime Type	Victim Cou
419/Overpayment	614	Health Care Related	1
Advanced Fee	384	IPR/Copyright and Counterfeit	5
Auction	442	Identity Theft	34
BEC/EAC	254	Investment	2
Charity	10	Lottery/Sweepstakes	119
Civil Matter	28	Malware/Scareware	6
Confidence Fraud/Romance	326	Misrepresentation	10
Corporate Data Breach	74	No Lead Value	12
Credit Card Fraud	274	Non-payment/Non-Delivery	1,84
Crimes Against Children	19	Other	218
Criminal Forums	0	Personal Data Breach	569
Denial of Service	28	Phishing/Vishing/Smishing/Pharming	399
Employment	467	Ransomware	67
Extortion	468	Re-shipping	2.
Gambling	1	Real Estate/Rental	280
Government Impersonation	319	Tech Support	298
Hacktivist	2	Terrorism	(
Harassment/Threats of	364	Virus	2
Violence			
Descriptors*			
Social Media	455	Virtual Currency	3

Source: FBI Cybercrime Compliant Center, 2016

ELECTROMAGNETIC PULSE



- The Critical Infrastructure Protection Act (CIPA) added to the Homeland Security Act of 2002
 - Protects Americans from EMPs
- Densely populated may be more prone to damages from an EMP
 - No reports of EMP occurrences in the region
- Future occurrences are unlikely

PRIORITY RISK INDEX (PRI)



Qualitative method to "rank" identified hazards based on:

- Probability (30%)
- Impact (30%)
- Spatial Extent (20%)
- Warning Time (10%)
- Duration (10%)

Highest possible PRI value = 4.0

Pee Dee Lumber Region Highest Value = 3.0

PRI EXPLAINED

PRI Category	Degree of Risk				
	Level	Criteria	Index Value	Assigned Weighting Factor	
	Unlikely	Less than 1% annual probability	1		
Dva ba bilitu	Possible	Between 1 and 10% annual probability	2	200/	
Probability	Likely	Between 10 and 100% annual probability	3	30%	
	Highly Likely	100% annual probability	4		
	Minor	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.	1		
Impact	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2	200/	
	Critical	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one week.	3	30%	
	Catastrophic	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	4		

PRI EXPLAINED, CONTINUED

	Degree of Risk				
PRI Category	Level	Criteria	1 2 3 4 1 2 3 4 4 1 2 3 4 4	Assigned Weighting Factor	
	Negligible	Less than 1% of area affected	1		
	Small	Between 1 and 10% of area affected	2		
Spatial Extent	Moderate	Between 10 and 50% of area affected	3	3 20%	
	Large	Between 50 and 100% of area affected	4		
	More than 24 hours	Self explanatory	1		
Warning Time	12 to 24 hours	Self explanatory	2	10%	
Warning Time	6 to 12 hours	Self explanatory	3	10%	
	Less than 6 hours	Self explanatory	4		
	Less than 6 hours	Self explanatory	1		
Duration	Less than 24 hours	Self explanatory	2	100/	
Duration	Less than one week	Self explanatory	3	10%	
	More than one week	Self explanatory	4		

CONCLUSIONS ON HAZARDS RISK



HIGH RISK

Severe Thunderstorms/Tornadoes
Hazardous Substances

MODERATE RISK

Excessive Heat

Severe Winter Weather

Wildfires

Flooding

Hurricanes and Coastal Hazards

Cyber

Infectious Disease

Drought

LOW RISK

Dam Failure

Earthquakes

Terrorism

Radiological Emergency

Geological (Landslide)

Electromagnetic Pulse

SOCIAL VULNERABILITY



DMA 2000 requires that HMPs consider socially vulnerable populations. These populations can be more susceptible to hazard events, based on respective factors including their physical and financial ability to react or respond during a hazard and the location and construction quality of their housing.

Demographics that can be used as indicators when quantifying social vulnerability include, but are not limited to:

- Those living in low-income households. Percent poverty is a function of the number of people in a household, that household's income, and if household income meets a threshold as defined by the US Census
- The elderly persons aged 65 and over as a percent of total population; and
- Children persons under the age of 5 as a percent of total population.

COMPARING SOCIAL VULNERABILITY



Vulnerable populations are likely to be seriously impacted by disasters, and least able to recover without additional support. The strength and capacity of a community's response and recovery system involves attentiveness to its most vulnerable citizens.

Jurisdiction	Total Population	Poverty Level	Elderly (65+ yrs)	Children (<5 yrs)	Disability (<65 yrs)
Population Demographics					
Anson County	26,948	20.7%	19.3%	5.3%	12.8%
Montgomery County	27,298	16.0%	21.1%	5.2%	10.1%
Richmond County	46,639	21.5%	18.3%	6.1%	13.9%
Scotland County	36,157	29.7%	18.8%	6.6%	11.8%
State of North Carolina	9,535,483	12.9%	16.7%	5.8%	9.4%

Source: Census Bureau, Quick Facts (2010)

CAPABILITY OVERVIEW



Purpose

- Measures community capability to implement hazard mitigation activities
- Identifies and targets gaps, conflicts and opportunities with existing local plans, programs, policies, etc.
- Identifies mitigation measures already in place or underway

Capability Assessment Survey

- Measures existing capabilities
 - Planning and regulatory
 - Administrative and technical
 - Fiscal
 - Political

^{*} Coupled with the Risk Assessment, the Capability Assessment helps to form the foundation for identifying Mitigation Actions

CAPABILITY INDICATORS



- National Flood Insurance Program (NFIP) Participation
- Community Rating System (CRS) Participation
- Building Code Effectiveness Grading Schedule (BCEGS)
- Local Capability Assessment Survey
 - Inventory and evaluation of existing plans, policies, programs and ordinances
 - Measures administrative, technical, fiscal and political capability
 - Includes self-assessment of local capabilities



Plan Policy, Program or Ordinance	Percentage*
Hazard Mitigation Plan	100%
Disaster Recovery Plan	0%
Comprehensive Land Use Plan	100%
Floodplain Management Plan	0%
Stormwater Management Plan	40%
Emergency Operations Plan	100%
Continuity of Operations Plan	60%

^{*} Percentage of jurisdictions with item in place / under development



Plan Policy, Program or Ordinance	Percentage*
Capital Improvements Plan	100%
Historic Preservation Plan	0%
Zoning Ordinance	60%
Subdivision Ordinance	100%
Flood Damage Prevention Ordinance	100%
Post-Disaster Redevelopment Plan	0%
Building Code	100%
Fire Code	100%

^{*} Percentage of jurisdictions with item in place / under development



- Planning and Regulatory Capability
 - Most jurisdictions are in Moderate or High range
- Administrative and Technical Capability
 - Variation between the jurisdictions (mainly with respect to planners, grant writers, and other specialized personnel)
 - About 100% of jurisdictions have staff skilled in GIS
 - All jurisdictions have emergency manager and floodplain manager
- Fiscal Capability
 - Most jurisdictions in the Moderate range
 - 100% have partnering arrangements or intergovernmental agreements



- All jurisdictions currently participate in the NFIP
- No jurisdictions in the region participate in CRS
 - May want to consider as mitigation action
 - Most beneficial to areas with many NFIP policies
 - agreements

	Low Vulnerability	Moderate Vulnerability	High Vulnerability
High Capability	Best Case Scenario		
Moderate Capability			
Low Capability			Worst Case Scenario



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Mitigation Strategy Development

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HAZARD MITIGATION PLANNING Cold Service Signature Sig

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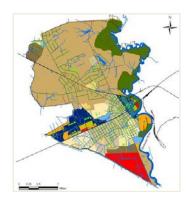
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THINK OF MITIGATION THIS WAY...



- 1) We want to mitigate hazard impacts on the <u>existing</u> development in our communities
 - Houses, businesses, infrastructure, critical facilities, etc.
- 2) We want to ensure that <u>future</u> <u>development</u> is conducted in a way that doesn't increase our vulnerability
 - Best done by having good plans, policies and procedures in place







THINK OF MITIGATION ACTIONS THIS WAY



- Risk Assessments help us identify Problem Statements:
 - EXAMPLE: Our community has X properties in the floodplain.

- A Mitigation Action helps identify a solution to that problem:
 - EXAMPLE: Seek funding through FEMA Mitigation Grant programs to remove floodprone properties from the floodplain.

BREAKING IT DOWN

Planning and zoning Acquisition Floodplain protection Reservoirs Warning systems Outreach projects Building codes Relocation Building elevation Preservation Critical facilities protection Stormwater management regulations Safe rooms, shutters, shatter-resistant maintenance Capital improvements programming Relocation Watershed management Relocation Watershed management Riparian buffers Stormwater Forest management diversions Betalevalue Forest management control Stormwater Metland preservation and restoration Habitat preservation Capital improvements programming Forest management Detention/ retention basins Channel modification Storm sewers Forest management Channel modification Storm sewers Forest management Channel modification Storm sewers Forest management Emergency response Library materials School children educational programs Hazard expositions Hazard expositions	Prevention	Property Protection	Natural Resource Protection	Structural Projects	Emergency Services	Public Education/ Awareness
Open space preservation Critical facilities protection Stormwater management regulations Floodplain regulations Stormwater management regulations Drainage system maintenance Capital improvements programming Building elevation Riparian buffers Riparian buffers Stormwater diversions Stormwater diversions Detention/ retention basins Channel modification Storm sewers Floodwalls Shelter Operations Hazard map information Evacuation planning and management Real estate disclosure Channel modification Storm sewers Floodwalls Shelter Operations Evacuation planning and management Real estate disclosure Channel modification Storm sewers Floodwalls Shelter Operations Hazard map information Real estate disclosure Channel modification Storm sewers Floodwalls Shelter Operations Hazard map information Real estate disclosure Channel modification Storm sewers Floodwalls Shelter Operations Hazard map information Real estate disclosure Channel modification Storm sewers Floodwalls Shelter Operations Hazard map information Real estate disclosure Channel modification Storm sewers Floodwalls Shelter Operations Hazard map information Real estate disclosure Channel modification Storm sewers Floodwalls Floodwalls Shelter Operations Hazard map information Real estate disclosure Channel modification Storm sewers Floodwalls	Planning and zoning	Acquisition	Floodplain protection	Reservoirs	Warning systems	Outreach projects
Setbacks	Open space preservation Floodplain regulations Stormwater management regulations Drainage system maintenance Capital improvements	Building elevation Critical facilities protection Retrofitting Safe rooms, shutters, shatter-resistant glass	management Riparian buffers Forest management Erosion and sediment control Wetland preservation and restoration	Floodwalls Stormwater diversions Detention/ retention basins Channel modification	equipment Shelter Operations Evacuation planning and management Emergency response training and exercises Sandbagging for flood protection	demonstration events Hazard map information Real estate disclosure Library materials School children educational programs



Step 1: Review Regional Goals

	Goal
Goal #1	Increase public awareness of hazard mitigation and hazard risk.
Goal #2	Enhance existing or create new policies and ordinances that will help reduce the damaging effects of natural hazards.
Goal #3	Increase capabilities to support and implement effective mitigation measures.
Goal #4	Protect the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation projects.
Goal #5	Encourage conservation of natural environments including forests, surface waters, wetlands, floodplains, and stream corridors.



Step 2: Update Mitigation Actions

 Provide status update for existing mitigation actions (completed, deleted, deferred)

Location	Number of Mitigation Actions
Anson County	29
Ansonville	28
Lilesville	28
McFarlan	28
Morven	28
Peachland	28
Polkton	29
Wadesboro	28
Montgomery County	24
Biscoe	13
Candor	12
Mount Gilead	15
Star	12
Troy	20
Richmond County	44
Dobbins Heights	9
Ellerbe	14
Hamlet	14
Hoffman	9
Norman	9
Rockingham	33
Scotland County	18
East Laurinburg	18
Gibson	18
Laurinburg	18
Wagram	18
-	



Step 3: Identification of New Actions

- Identify and discuss a full range of possible mitigation projects/available mitigation techniques
 - Consistent with mitigation goals and other community objectives
 - Based on hazard risk and local capability
- Critical facilities that need retrofitting/relocated
- Projects/activities to reduce hazard impacts
- Alleviate repetitive flood losses
- Others? (Emergency Services, Prevention, Natural Resource Protection, Property Protection, Structural Projects, Public Education)



Alleviate repetitive loss properties in Pee Dee Lumber Region

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Anson County	0		0	\$0	\$0	\$0	\$0
Ansonville	0		0	\$0	\$0	\$0	\$0
Lilesville	0		0	\$0	\$0	\$0	\$0
McFarlan	0		0	\$0	\$0	\$0	\$0
Morven	0		0	\$0	\$0	\$0	\$0
Peachland	0		0	\$0	\$0	\$0	\$0
Polkton	0		0	\$0	\$0	\$0	\$0
Wadesboro	0		0	\$0	\$0	\$0	\$0
Unincorporated Area	0		0	\$0	\$0	\$0	\$0
Montgomery County	0		0	\$0	\$0	\$0	\$0
Biscoe	0		0	\$0	\$0	\$0	\$0
Candor	0		0	\$0	\$0	\$0	\$0
Mount Gilead	0		0	\$0	\$0	\$0	\$0
Star	0		0	\$0	\$0	\$0	\$0
Troy	0		0	\$0	\$0	\$0	\$0
Unincorporated Area	0		0	\$0	\$0	\$0	\$0
Richmond County	2		4	\$47,511	\$0	\$47,511	\$11,878
Dobbins Heights	0		0	\$0	\$0	\$0	\$0
Ellerbe	0		0	\$0	\$0	\$0	\$0
Hamlet	0		0	\$0	\$0	\$0	\$0
Hoffman	0		0	\$0	\$0	\$0	\$0
Norman	0		0	\$0	\$0	\$0	\$0
		2 Non-					
Rockingham	2	residential	4	\$47,511	\$0	\$47,511	\$11,878
Unincorporated Area	0		0	\$0	\$0	\$0	\$0
Scotland County	0		0	\$0	\$0	\$0	\$0
East Laurinburg	0		0	\$0	\$0	\$0	\$0
Gibson	0		0	\$0	\$0	\$0	\$0
Laurinburg	0		0	\$0	\$0	\$0	\$0
Wagram	0		0	\$0	\$0	\$0	\$0
Unincorporated Area	0		0	\$0	\$0	\$0	\$0
PEE DEE LUMBER REGION TOTAL	2		4	\$47,511	\$0	\$47,511	\$11,878

Source: National Flood Insurance Program



In General...

- Strengthen and Protect Critical Facilities
- Educate Public
 - Seasonal hazard awareness weeks
 - Encourage household preparedness (<u>www.ready.gov</u>)
- Identify pre-existing structures/rooms for sheltering
- Discourage future building in known hazard areas
 - Flood prone areas are often great for parks!
 - Create regulations to prevent development or require more stringent building standards



Mitigation Ideas

A Resource for Reducing Risk to Natural Hazards

January 2013





Potential Actions to Mitigate High Wind/Thunderstorm/Tornado

- Strengthen building codes
 - Tie-down requirements for manufactured housing
 - Require structural bracing, straps/clips, anchor bolts, etc.
- Protect power lines/traffic signals
 - Schedule regular inspections of utility poles to ensure quality
 - Mast arms for traffic lights
- Retrofit buildings/facilities
 - Anchor roof-mounted ventilation and heat/AC units
 - Use load path connectors to strengthen structure
- Safe rooms
 - Require in new schools, nursing homes
 - Encourage construction in shopping malls, fairgrounds, manufactured home parks



Potential Actions to Mitigate Flooding Local planning and regulatory efforts can be improved by:

- Designating a local floodplain manager and/or CRS coordinator who achieves CFM certification.
- Establishing watershed-based planning initiatives to address the flood hazard with neighboring jurisdictions.
- Limiting the percentage of allowable impervious surface within developed parcels.
- Adding or increasing "freeboard" requirements (feet above base flood elevation) in the flood damage ordinance.



Potential Actions to Mitigate Flooding

Structure and Infrastructure Projects can be conducted safely by:

- Removing existing structures from flood hazard areas
- Installing, re-routing, or increasing the capacity of a storm drainage system.
- Conducting regular maintenance for drainage systems and flood control substances

Natural Systems can be protected through:

- Protecting and preserving wetlands to help prevent flooding in other areas.
- Developing an open space acquisition, reuse, and preservation plan targeting hazard areas.



Potential Actions to Mitigate Winter Weather

Buildings and infrastructure can be protected from the impacts of winter storms with the following regulations:

- Adopting the International Building Code (IBC) and International Residential Code (IRC).
- Ensuring the development and enforcement of building codes for roof snow loads.
- Discouraging flat roofs in areas that experience heavy snows.
- Adding building insulation to walls and attics.
- As buildings are modified, using new technology to create or increase structural stability.
- Retrofitting public buildings to withstand snow loads and prevent roof collapse.



Potential Actions to Mitigate Winter Weather Power lines can be protected from the impacts of winter storms with the following techniques:

- Establishing standards for all utilities regarding tree pruning around lines.
- Burying overhead power lines.
- Using designed-failure mode for power line design to allow lines to fall or fail in small sections rather than as a complete system to enable faster restoration.
- Installing redundancies and loopfeeds.



Potential Actions to Mitigate Winter Weather

Public awareness of severe winter storms can be improved through the following efforts:

- Informing the public about severe winter weather impacts.
- Producing and distributing family and traveler emergency preparedness information about severe winter weather hazards.
- Including safety strategies for severe weather in driver education classes and materials.
- Encouraging homeowners to install carbon monoxide monitors and alarms.
- Educating citizens that all fuel-burning equipment should be vented to the outside.

Protect vulnerable populations from the impacts of severe winter storms through the following efforts:

- Identifying specific at-risk populations that may be exceptionally vulnerable in the event of longterm power outages.
- Organizing outreach to vulnerable populations, including establishing and promoting accessible heating centers in the community.

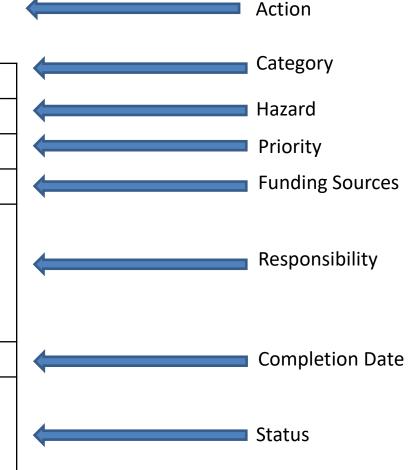
MITIGATION ACTION PLAN



ACTION #PP-13

Evaluate safety and security of critical services (public and private) and facilities – roads, bridges, water, sewer, electricity, etc. – and critical facilities – fire, rescue, medical, etc.

Category:	Property Protection
Hazard Addressed:	Flood
Priority:	High
Potential Funding Sources:	Local
Lead Agency/Department:	Board of Commissioners, Emergency Management, Power and Gas Companies, Carolinas Medical Center, NCDOT
Target Completion Date:	
Implementation Status (2022):	Deferred. This action will be revisited during the 2019 update of the hazard mitigation plan.



PUBLIC SURVEY RESULTS



115 Responses Collected

The survey has been made available for a length of approximately 3 months and was shared/promoted through municipal and county media sites as well as through various email groups.

PUBLIC SURVEY RESULTS



- Highest response rates from Wadesboro (41), Lilesville (22), and Polkton (16) totaling 79 responses
- Most disasters experienced: Ice/snow storm, flood, and hurricane
 - Snow Storm 2000
 - Hurricane Hugo
 - Hurricane Florence
- Highest threat: Severe Thunderstorm/High Winds (25.2%)
- Second highest threat: Flooding (15.7%)
- Internet (52.2%) is the most effective way to receive information, mail (20.9%) is the second most effective way
 - Email was suggested
 - Text alerts were suggested

PUBLIC SURVEY RESULTS, CONTINUED



- 70% are interested in making their homes/neighborhoods more resistant to hazards
- 70.4% of responses said they do NOT know what office to contact regarding risk reduction
- Examples of steps taken to make home/neighborhood more resistant to disasters:
 - Tree trimming, tree removal
 - Drainage improvements
 - Generators

PUBLIC SURVEY RESULTS, CONTINUED



What are some steps your local government could take to reduce or eliminate the risk of future hazard damages?

"Public education & awareness"

"Vegetation maintenance and monitoring"

"Communicate consistently over county social media"











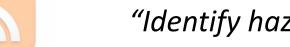
"Regular inspections by local authorities"











"Identify hazard-prone areas"

PUBLIC SURVEY RESULTS, CONTINUED



Community's response to important mitigation techniques:

- Emergency Services: 90.4%
- Public Education and Awareness: 80%
- Prevention: **77.8**%
- Natural Resources Protection: 65.2%
- Structural Projects: **56.6%**
- Property Protection: 47.8%

PLAN MAINTENANCE



- Monitoring and reporting
- Evaluating and updating
- Implementation mechanisms
- Continued public involvement



NEXT STEPS

- Provide updates for existing Mitigation Actions
 - Due: 3/10/22
- Provide "new" Mitigation Actions
 - Due: 3/10/22
- Complete draft of plan to be delivered by ESP
 - Due: 3/22/22
- Current Plan Expires: 3/22/23

QUESTIONS, ISSUES OR CONCERNS



- Nathan Slaughter
 - -(919)415-2726
 - nslaughter@espassociates.com

Meeting Summary

Total Number of Participants

Meeting Title Pee Dee Lumber Regional Hazard Mitigation Plan Update Kickoff

Meeting Start Time 7/8/2021, 9:53:47 AM Meeting End Time 7/8/2021, 11:00:20 AM

Meeting Id b1cc8588-01ed-4711-a635-eb5213bea8f9

Full Name	Join Time	Leave Time	Duration	Email	Role	Participant ID (UPN)
Nathan Slaughter	7/8/2021, 9:53:47 AM	7/8/2021, 10:54:29 AM	1h	nslaughter@espassociates.com	Organizer	
Watkins, Benjamin (CBO)	7/8/2021, 9:56:52 AM	7/8/2021, 10:54:26 AM	57m 33s	BENJAMIN.WATKINS@ncdps.gov	Presenter	
Bob Smith	7/8/2021, 9:56:54 AM	7/8/2021, 10:54:14 AM	57m 20s	wrsmith@richmondnc.com	Presenter	
Baker, Carl	7/8/2021, 9:57:45 AM	7/8/2021, 10:54:26 AM	56m 40s	cbaker@ncem.nccrimecontrol.org	Presenter	
Crew, John (NCEM)	7/8/2021, 9:58:41 AM	7/8/2021, 10:54:24 AM	55m 43s	John.Crew@ncdps.gov	Presenter	
Diggs, Rodney	7/8/2021, 9:58:48 AM	7/8/2021, 11:00:20 AM	1h 1m	rodney.diggs@anson.nc.gov	Presenter	
Robert Sampson (Guest)	7/8/2021, 9:58:56 AM	7/8/2021, 10:54:21 AM	55m 25s		Presenter	
Andrew Olive	7/8/2021, 9:59:07 AM	7/8/2021, 10:54:27 AM	55m 19s	aolive@espassociates.com	Presenter	
191099782	238 7/8/2021, 9:59:25 AM	7/8/2021, 10:54:24 AM	54m 59s		Attendee	
Lewis, Jennifer J	7/8/2021, 10:00:22 AM	7/8/2021, 10:07:24 AM	7m 1s	jennifer.lewis@ncdps.gov	Presenter	
Mello, John (NCEM)	7/8/2021, 10:00:33 AM	7/8/2021, 10:54:27 AM	53m 54s	John.Mello@ncdps.gov	Presenter	

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Meeting Summary

Total Number of Participants

Meeting Title

Pee Dee Lumber Mitigation Strategy Meeting

Meeting Start Time 2/10/2022, 9:54:24 AM Meeting End Time 2/10/2022, 1:42:00 PM

Meeting Id fac5c8b0-fded-4893-b640-5b3d37de9290

Full Name	Join Time	Leave Time	Duration	Email	Role	Participant ID (UPN)
Nathan Slaughter	2/10/2022, 9:54:24 AM	2/10/2022, 11:36:48 AM	1h 42m	nslaughter@espassociates.com	Organizer	nslaughter@espassociates.com
Rodney Diggs	2/10/2022, 9:54:31 AM	2/10/2022, 1:42:00 PM	3h 47m	rdiggs@ansoncountync.gov	Presenter	rdiggs@ansoncountync.gov
19105727446	5 2/10/2022, 9:54:33 AM	2/10/2022, 11:35:57 AM	1h 41m		Attendee	
Watkins, Benjamin (CBO)	2/10/2022, 9:55:16 AM	2/10/2022, 11:36:19 AM	1h 41m	benjamin.watkins@ncdps.gov	Presenter	BENJAMIN.WATKINS@ncdps.gov
Mello, John (NCEM)	2/10/2022, 9:57:51 AM	2/10/2022, 11:36:09 AM	1h 38m	John.Mello@ncdps.gov	Presenter	John.Mello@ncdps.gov
Baker, Carl (NCEM)	2/10/2022, 9:58:45 AM	2/10/2022, 11:36:23 AM	1h 37m	carl.baker@ncdps.gov	Presenter	carl.baker@ncdps.gov
Crew, John (NCEM)	2/10/2022, 9:59:30 AM	2/10/2022, 11:36:34 AM	1h 37m	John.Crew@ncdps.gov	Presenter	John.Crew@ncdps.gov
Andrew Olive	2/10/2022, 10:00:29 AM	2/10/2022, 11:36:24 AM	1h 35m	aolive@espassociates.com	Presenter	aolive@espassociates.com
Hannah Delude	2/10/2022, 10:03:39 AM	2/10/2022, 11:36:04 AM	1h 32m	hdelude@espassociates.com	Presenter	hdelude@espassociates.com
19102664322	2 2/10/2022, 10:04:53 AM	2/10/2022, 11:35:59 AM	1h 31m		Attendee	

10



Pee Dee Lumber Regional Hazard Mitigation Plan - Public Survey

Please take my survey - thanks!

P1 anonymous

February 1, 2022 7:44 PM - 00:03:20 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Winter storms and hurricanes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Removed trees

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P2 spowell@ansoncountync.gov

February 1, 2022 8:00 PM - 00:04:24 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:
Cyber Attack

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P3 khtina2213@gmail.com

February 1, 2022 8:00 PM - 00:03:56 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Unincorporated Scotland County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Limbs removed from trees near my house.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

Q17 17. Are there any other ways you prefer to receive information? If so, please explain:

Email updates. I don't have social media or local TV channels. Email or mail would be a great way for me to receive information.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P4 anonymous

February 1, 2022 8:02 PM - 00:03:53 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Ansonville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Flooding

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.

20. Prevention - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P5 quantelya.johnson@gmail.com

February 1, 2022 8:03 PM - 00:07:28 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

The land field in Polkton is very hazardous to the community.

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

Yes

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

I have flood insurance

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Cut trees

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Community robocall if there's danger in the area
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Cut more trees that are leaning toward powerlines and homes, make sure all ditches are dug out to prevent unnecessary flooding.

- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain: N/A
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

N/A

P6 anonymous

February 1, 2022 8:05 PM - 00:09:08 - London, United States - Windows 10 - IE 11

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County? Yes Q3 3. If "Yes," please explain. hurricane Q4 5. How concerned are you about the possibility of your community being impacted by a disaster? Somewhat concerned Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Hurricane and Coastal Hazards Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Winter Weather Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain: winter storms Q8 8. Is your home located in a floodplain? Nο Q9 9. Do you have flood insurance? No Q10 10. If you do not have flood insurance, why not? Not located in floodplain Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards? No Q13 13. If "Yes," please explain: cant afford it

14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P7 anonymous

February 1, 2022 8:06 PM - 00:07:12 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Rockingham

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Cyber Attack

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

weapons

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

 not sure
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P8 anonymous

February 1, 2022 8:09 PM - 00:05:15 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

hurricane floods in 2018

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Tornadoes
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Drought
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: email
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P9 anonymous

February 1, 2022 8:19 PM - 00:04:25 - Monroe, United States - iOS 15.2.1 - Mobile Safari 15

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Flooding
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P10 uwharrie@embarqmail.com

February 1, 2022 8:28 PM - 00:07:37 - London, United States - Windows 10 - Firefox 96

Q1 1. Where do you live?

Troy

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

snow storm of 2000. Hurricane Fran. during both lost power for over 5 days.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

I think most hazzards would be weather related

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

we have generators and supplemental heat. if severe weather is predicted we stock up on dry and can goods.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: text or email
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood? making sure that internet access is available to everyone. Making sure that all areas have good cell phone signal coverage
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P11 clarkegina@rocketmail.com

February 1, 2022 8:31 PM - 00:05:07 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hugo

Snowstorm 2000 0r 2001

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Lightning

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Nο

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Information on how to reduce the threat and communication when threat is possible.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P12 crorie@ansoncountync.gov

February 1, 2022 8:32 PM - 00:22:41 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P13 adawkins@ansoncountync.gov

February 1, 2022 8:32 PM - 00:10:22 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

Q17 17. Are there any other ways you prefer to receive information? If so, please explain: text or email

Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.

20. Prevention - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P14 anonymous

February 1, 2022 8:41 PM - 00:04:10 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Hugo and the disaster around 2018

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: social media and newspaper
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

 not sure
- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain: N/A
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Not important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Not important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P15 anonymous

February 1, 2022 8:56 PM - 00:03:17 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P16 anonymous

February 1, 2022 9:08 PM - 00:04:26 - Nebo, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

snow, ice and hurricanes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

help keep trees and limbs away from powerlines and ditches clear from debris

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P17 anonymous

February 1, 2022 9:34 PM - 00:05:00 - London, United States - Android 11 - Facebook 352

Q1 1. Where do you live?

Hamlet

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Excessive Heat

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P18 anonymous

February 1, 2022 9:42 PM - 00:04:30 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

No

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P19 cmclendon@ansoncountync.gov

February 1, 2022 9:43 PM - 00:03:01 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

HURRICANE FLORENCE

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

Yes

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

ALREADY HAVE IT

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
 Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P20 kgregory@ansoncountync.gov

February 1, 2022 9:45 PM - 00:02:12 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Morven

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Cyber Attack

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

insurance, built house on hill, no trees in yard

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P21 dmcelroy@ansoncountync.gov

February 1, 2022 9:50 PM - 00:04:13 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Hurricane and Coastal Hazards
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

excessive heat

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

personal reasons

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: text message
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P22 anonymous

February 1, 2022 9:51 PM - 00:03:01 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Morven

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Other

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P23 anonymous

February 1, 2022 10:06 PM - 00:03:27 - London, United States - Windows 10 - IE 11

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

hurricanes/ snow

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Infectious Disease

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

No

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P24 anonymous

February 1, 2022 10:59 PM - 00:05:09 - Monroe, United States - Windows 7 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P25 anonymous

February 1, 2022 11:03 PM - 00:03:36 - Indian Trail, United States - Android 9 - Samsung Browser 16

Q1 1. Where do you live?

Peachland

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Public education seminars at local community buildings and fire depots

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P26 hberry822@gmail.com

February 2, 2022 12:01 AM - 00:05:06 - London, United States - iOS 15.2 - Chrome 97

Q1 1. Where do you live?

Rockingham

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Winter Weather
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P27 chase.rhinehardt98@gmail.com

February 2, 2022 12:35 AM - 00:06:51 - Marshville, United States - iOS 15.2.1 - Facebook undefined

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

Q17 17. Are there any other ways you prefer to receive information? If so, please explain:

Email

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

More information and suggestions for preventing and rebuilding

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P28 anonymous

February 2, 2022 1:37 AM - 00:04:31 - Wadesboro, United States - Android 12 - Facebook 351

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

No

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Amy Little

I.am.amylittle@gmail.com

P29 anonymous

February 2, 2022 1:45 AM - 00:02:36 - Wadesboro, United States - Android 11 - Samsung Browser 14

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P30 jwoodburn@windstream.net

February 2, 2022 5:20 AM - 00:16:13 - Marshville, United States - Mac OS 10.15.6 - Safari 15

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Hugo

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Cyber Attack

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Coronavirus

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q11 11. If "Other," please explain:

N/A

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

County has developed a disaster recovery plan.

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

Q17 17. Are there any other ways you prefer to receive information? If so, please explain:

Newspapers, workshops, internet.

- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

 Educate the public.
- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:

 Building codes that make structures more sufficient to withstand elements of destructive weather and the elements.
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Jarvis T. Woodburn jwoodburn@windstream.net 704-694-0835

P31 wsteagall@ansoncountync.gov

February 2, 2022 6:59 AM - 00:06:51 - Indian Trail, United States - iOS 15.2.1 - Mobile Safari 15

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Florence

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

No

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P32 scottjones622924@hotmail.com

February 2, 2022 12:02 PM - 00:04:06 - Charlotte, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:
Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Drought

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P33 jdbricken@ansoncountync.gov

February 2, 2022 12:19 PM - 00:12:19 - San Jose, United States - iOS 15.2.1 - Mobile Safari 15

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Drought
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Hurricane and Coastal Hazards
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

A socialist government

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

We are as self sufficient as possible. We farm, raise cattle, have a garden, heat with wood and hunt.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Local government website

Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.

20. Prevention - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P34 dsingletary@ansoncountync.gov

February 2, 2022 1:33 PM - 00:07:32 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Rockingham

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Ice/winter weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Placed retaining rocks in driveway

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

I feel like our local government has done an excellent job handling hazards in the community

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P35 anonymous

February 2, 2022 1:35 PM - 00:02:32 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Winter Weather

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P36 athomas@ansoncountync.gov

February 2, 2022 1:39 PM - 00:06:32 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Florence

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

No

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

have plans and funds in place for damages.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P37 loriross18@icloud.com

February 2, 2022 1:42 PM - 00:02:53 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Wildfire

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Excessive Heat

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in

No

your area?

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P38 kmeverha@ncsu.edu

February 2, 2022 1:46 PM - 00:04:55 - Wadesboro, United States - Mac OS 10.15.7 - Safari 15

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Cyber Attack
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Educational material about ways to mitigate risk; mailings, social media posts, short videos, infographics, etc.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P39 cmcneil@ansoncountync.gov

February 2, 2022 1:47 PM - 00:05:21 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Tree damage from high winds

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Flooding

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

My current home owners insurance does not offer flood insurance

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P40 anonymous

February 2, 2022 1:51 PM - 00:03:32 - London, United States - Windows 10 - IE 11

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Dam Failure

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Infectious Disease
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Generator if the power goes out, had trees cut down and away from my home.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q17 17. Are there any other ways you prefer to receive information? If so, please explain:

TV. Newspaper

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P41 kmclendon@ansoncountync.gov

February 2, 2022 1:51 PM - 00:21:16 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Ansonville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hurricane and Coastal Hazards

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Infectious Disease
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P42 anonymous

February 2, 2022 1:59 PM - 00:03:10 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Flooding

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P43 anonymous

February 2, 2022 2:20 PM - 00:13:38 - Wadesboro, United States - Mac OS 10.15 - Firefox 96

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Hugo

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Cyber Attack

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Flooding

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Too expensive

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Keep storm drains clean, have insurance, keep gutters clean, double pane windows and doors, keep trees trimmed.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Mail

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Keep run off drains cleared so water doesn't build up in streets. Maintain the city sewer system and pipes.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P44 anonymous

February 2, 2022 2:43 PM - 00:18:35 - Wadesboro, United States - Mac OS 10.16.0 - Chrome 81

Q1 1. Where do you live?

Rockingham

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane damage to dwelling

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hazardous Substances

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Removed trees off my property that were within falling distance of my and my neighbors homes.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Acorn alerts are a great way to warn of upcoming weather. It may also be a good way to opt-in to receive hazard reduction information or related information. Forgot to mention that I also think QR codes are a good way to share information if sharing information in a newspaper or other hard copy.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P45 jtarlton@ansoncountync.gov

February 2, 2022 2:44 PM - 00:06:05 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Too expensive

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

keep trees cut away from powerlines and make sure we have what we need in case of a disaster

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: work, friends
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood? continue to do what they are doing
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P46 anonymous

February 2, 2022 3:42 PM - 00:06:47 - Charlotte, United States - iOS 14.8.1 - Mobile Safari 14

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Snow

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Infectious Disease

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

A more diverse and staffed Office of Anson County Emergency Management

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Not important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P47 anonymous

February 2, 2022 3:56 PM - 00:08:38 - Indian Trail, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane damage to out buildings and timber

High wind damage to home

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P48 wsmall@ansoncountync.gov

February 2, 2022 4:22 PM - 00:07:14 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Drought
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Erosion
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Drought Tolerant Plants

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Text
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Solar Energy, Green Energy, Paint roads and surfaces white to reflect sunlight.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P49 mharris@ansoncountync.gov

February 2, 2022 6:36 PM - 00:22:30 - London, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Morven

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Hugo

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Wildfire

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Cyber Attack

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:

 TV and/or Text
- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:

 When a building does get structural damage, tear it down do it doesn't look as bad in the neighborhood
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P50 anonymous

February 2, 2022 6:36 PM - 00:02:50 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Snow blast 2000.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P51 gerald.heather@anson.k12.nc.us

February 2, 2022 6:42 PM - 00:03:02 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Rockingham

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

During the hurricanes in 2018, the amount of water caused damage to our home and water was pouring into the kitchen through the window and walls.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Landslides
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Flooding
- Q8 8. Is your home located in a floodplain?

Yes

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Have trenches dig for better water to flow.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P52 sewell.mary@anson.k12.nc.us

February 2, 2022 6:46 PM - 00:05:34 - Rockingham, United States - Windows 10 - Firefox 87

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Cyber Attack

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Flooding

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

No

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P53 anonymous

February 2, 2022 6:47 PM - 00:02:57 - Wadesboro, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Peachland

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

 Drought
- **Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:** Severe Thunderstorms/High Wind
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Other

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P54 anonymous

February 2, 2022 6:49 PM - 00:02:56 - Rockingham, United States - Mac OS 10.15.7 - Chrome 97

Q1 1. Where do you live?

Morven

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

The hurricanes we had a couple of years ago - roads in Morven were washed out.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Flooding

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Other

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and

demonstration events.)

Very important

P55 nancywilliams67@windstream.net

February 2, 2022 6:51 PM - 00:02:29 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Cyber Attack

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P56 anonymous

February 2, 2022 6:51 PM - 00:03:42 - Rockingham, United States - Windows 10 - Firefox 96

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

The Hurricane a few years ago. 2018

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Hurricane and Coastal Hazards

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Tornadoes

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Oversee the Landlords and property owners who are not doing a fair job of upkeep and the amount of money they are now charging tenants.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P57 anonymous

February 2, 2022 6:51 PM - 00:06:22 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P58 anonymous

February 2, 2022 6:53 PM - 00:03:01 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Cyber Attack

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Infectious Disease

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.

20. Prevention - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P59 cincytitleist8@gmail.com

February 2, 2022 6:53 PM - 00:08:23 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Ansonville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Electromagnetic Pulse (EMP)

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Water contamination

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Newsletter / Flyer by mail communicating updates / plans currently in place / what to do if or when situations arise
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Communicate preparedness / provide opportunities within the communities to collaborate and form teams with community jobs / ways to step in and step up as a community team - developing plans for if and when a hazardous situation arises

Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:

Preparedness is key.

If communities don't know what to prepare for, or how to prepare for the most common hazards we face, we're already "behind" before we even start. Allow the individual communities to come together and be a part of developing a plan, having a part IN that plan and then practicing that plan by preparedness drills. When citizens are prepared, they're much more likely to take ownership and action to ensure the safety of all prior to an event occurring.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P60 sikes.michelle@anson.k12.nc.us

February 2, 2022 6:57 PM - 00:13:39 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Cyber Attack

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

infectious disease and severe weather winter and or severe storms summer

In 2000 above average snowfall caused the whole county to lose water and we also lost power for about a week.

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

generator and extra supplies

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood? transparent
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P61 cynthiaconklin59@gmail.com

February 2, 2022 6:59 PM - 00:04:59 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Excessive Heat

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P62 anonymous

February 2, 2022 7:01 PM - 00:04:38 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q8 8. Is your home located in a floodplain?

Nο

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Check for leaks associated with our local landfill. Just the debris that comes back out onto Hwy 74 from the dump; including dirt and particles can effect our local groundwater and other components of everyday life. I can't imagine what is happening from the dump itself.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P63 edwards.kimberly@anson.k12.nc.us

February 2, 2022 7:04 PM - 00:06:44 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane and Ice/snow storm

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Wildfire
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Hazardous Substances
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q17 17. Are there any other ways you prefer to receive information? If so, please explain:

Mail

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Identify which areas within a county are more prone to certain hazards. Also provide resources and availability if any of those resources are needed.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P64 bordden.nancy@anson.k12.nc.us

February 2, 2022 7:05 PM - 00:12:50 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood:
 Cyber Attack
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Possiblilty of terroist cyberally attacks to our water system, banking, governmental system,

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Back up water system; county and well.

Fire extguishers in various locations on property/checked yearly.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: email
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

More informative and supply the needed resources.

- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P65 anonymous

February 2, 2022 7:12 PM - 00:02:34 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Drought
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Excessive Heat
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Not important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P66 buchanonjames6960@gmail.com

February 2, 2022 7:13 PM - 00:05:46 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Infectious Disease
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Cyber Attack
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

no

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

 more people on the job that watching for these hazards
- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

James Buchanon

buchanonjames6960@gmail.com

P67 anonymous

February 2, 2022 7:16 PM - 00:10:38 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Loss of Electricity during snow of 2000 and Hurricanes.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Possible Wrecks and Chemical spills on Hwy 74 especially near the caution light in Lilesville. Hopefully, the new intersection has solved this issue.

However, I do believe the turnaround at Hwy 74 and Camden Street in Lilesville is too Close and the visibility toward Rockingham creates a danger for People turning around behind Lilesville School. Not sure what state engineer designed the turnaround behind the school but visibility is not good at times.

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Keeping Trees Trimmed and cutting down old trees that may fall on house or Power Lines

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Social Media, Text Message, Reverse 911, TV
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

 Can't think of any
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P68 anonymous

February 2, 2022 7:19 PM - 00:18:05 - Atlanta, United States - Android 10 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Hurricanes (High winds associated with these storms)

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

I have installed permanent firebreaks in my woodlots. I have a cleared defensible zone around my house & garage. I have installed an in ground irrigation system around my homes perimeter for use of protection in the event of a wildfire.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P69 nicolehyatt01@gmail.com

February 2, 2022 7:28 PM - 00:04:32 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Ansonville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Lightning
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Drought
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Nο

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Publicize information regarding most likely risks and steps we should have taken to prepare.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P70 damienlilly093@gmail.com

February 2, 2022 7:49 PM - 00:03:08 - Dalton, United States - iOS 15.2 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

I don't know right of hand

- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P71 anonymous

February 2, 2022 7:54 PM - 00:04:03 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P72 anonymous

February 2, 2022 7:56 PM - 00:05:02 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Infectious Disease

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:
 Tornado
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P73 heather.mcintyre@my.lpts.edu

February 2, 2022 8:05 PM - 00:04:57 - Wadesboro, United States - Windows 10 - Firefox 96

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Infectious Disease

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

cyber attacks and winter weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

I rent my property. Therefore, I just carry renter's insurance.

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
 Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Better enforce the rules and mandates they have in place.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P74 anonymous

February 2, 2022 8:23 PM - 00:02:38 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Too expensive

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P75 fowler.susan@anson.k12.nc.us

February 2, 2022 8:38 PM - 01:24:03 - Wadesboro, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Cyber Attack

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Drought
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Climate change overall. We have more severe weather and long periods without enough rainfall.

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Information through the local school system or through your local electric company are good ways and through your local town if live in one.
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Cut back trees, do controlled burns, have cyber security as much as possible, monitor places that flood on a regular basis, remove people from flood plains if necessary. Prepare for wildfires if we are in drought situations

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

davidandsusanfowler@gmail.com

P76 anonymous

February 2, 2022 8:44 PM - 00:05:20 - Marshville, United States - Android 10 - Chrome 97

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Infectious Disease

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hazardous Substances

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Not important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Not important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Not important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Not important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Not important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P77 twisterrev@yahoo.com

February 2, 2022 8:55 PM - 00:03:14 - Indian Trail, United States - iOS 15.2.1 - Facebook undefined

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P78 shiredavis@gmail.com

February 2, 2022 9:11 PM - 00:13:26 - Dallas, United States - iOS 15.1.1 - Mobile Safari 15

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Power outages, flooding

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Infectious Disease
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Too expensive

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Laid down sand bags and bricks when the threat of floods exist

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Meetings
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Inspections by local authorities such as meter readers and trash pick up personnel who see problem areas on a regular basis

Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain: It should be a team effort. Problems should be addressed in the early stages.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P79 young.lucas@anson.k12.nc.us

February 2, 2022 9:23 PM - 00:06:42 - Claremont, United States - iOS 15.3 - Safari 15

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Flooding

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Any objects that are affected by high winds are tied down

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Community watch or even designate supporters from the community

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P80 anonymous

February 2, 2022 9:52 PM - 00:10:42 - Indian Trail, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Ansonville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hugo

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Infectious Disease

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

terrorism,

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood? continue your efforts
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P81 maske.flora@gmail.com

February 2, 2022 9:56 PM - 00:10:34 - Rockingham, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

no

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

I stay in a good neighborhood.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P82 huntley.angela@anson.k12.nc.us

February 3, 2022 12:53 AM - 00:05:34 - Jasper, United States - Android 12 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P83 anonymous

February 3, 2022 12:57 AM - 00:06:05 - Indian Trail, United States - iOS 15.3 - Mobile Safari 15

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Flood

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Flooding

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

Insurance company stated I didn't need it not a flood area

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
 Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

School Meetings

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Offer services and workshops to teach homeowners and citizens how to prepare for disasters

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P84 psvrn@hotmail.com

February 3, 2022 1:14 AM - 00:23:26 - Wadesboro, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

The ice/snow storm of 2000 left the county without power, ability to use transportation, the need for shelters staffed and critical medical needs. Power for many took 2 weeks to be restored. Major tree destruction and damage for months.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

I try to keep trees maintained to prevent major structural damage.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Continue to maintain clear sewer drains, tree limb trimming near power lines, fund and support efforts to provide information/instruction on preventive measures for residents.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P85 craftinmama@yahoo.com

February 3, 2022 4:48 AM - 00:05:29 - Indian Trail, United States - Android 11 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

No big trees near house

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P86 greene.john@anson.k12.nc

February 3, 2022 11:54 AM - 00:08:39 - Gaffney, United States - iOS 15.2.1 - Mobile Safari 15

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Hugo

Blizzard of 2000

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Severe winter weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Storm shutters

Generator

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Mandate that utility companies keep power lines and communication lines free of trees and other threats

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P87 rushing.sarah@anson.k12.nc.us

February 3, 2022 12:57 PM - 00:04:35 - Wadesboro, United States - Windows 10 - Chrome 98

Q1 1. Where do you live?

Peachland

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Winter storm / Hurricane

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

NO

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Visit each neighborhood, then let the community know about any risk that is possible to their neighborhood.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P88 kmccollum@live.com

February 3, 2022 2:09 PM - 00:05:00 - Rockingham, United States - Windows 10 - Chrome 96

Q1 1. Where do you live?

Peachland

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Infectious Disease
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Cyber Attack
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Too expensive

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
 Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

- Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

 Mail
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P89 lesliekay78@gmail.com

February 3, 2022 2:37 PM - 00:04:20 - Wadesboro, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Tornado/Hurricane damage (tree down on home) in 1996.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

tree maintenance

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

I think Emergency Mgmt/Utilities could monitor trees that are at risk of falling in roadways/onto powerlines a little more. I know there are some areas that are excessively risky to trees falling into roadways or on lines. Maybe a little more outreach to prevent this type of situation could help prevent some of these that cause accidents and/or power outages for extended times.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Leslie Cureton

lesliekay78@gmail.com

P90 carpenter.sharolyn@anson.k12.nc.us

February 3, 2022 2:38 PM - 00:03:27 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Lightning
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P91 anonymous

February 3, 2022 2:58 PM - 00:03:15 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Hamlet

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hazardous Substances

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Not keeping / limiting hazardous supplies

Proper storage of hazardous supplies

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P92 davis.jodi@anson.k12.nc.us

February 3, 2022 3:35 PM - 02:05:06 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

I was never impacted but I experienced Hurricane Michael back in 2017. The areas in our county experienced pretty serve flooding.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Infectious Disease
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Flooding
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q13 13. If "Yes," please explain:

I click no but I have been vaccinated against COVID to help do my part from stopping the spread.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
 Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

School Meetings

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: I do also read the newspaper and view social media to receive my news.
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Educate. That's why I said school meetings. We educate our young so they make our future brighter. Plus it never hurts to invest in schools.

- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:

 Just let people feel heard. No one cares how much you know until you know how much you care.
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area. (Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Not important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P93 anonymous

February 3, 2022 3:49 PM - 00:10:56 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Flooding

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q8 8. Is your home located in a floodplain?

Yes

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Nο

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood? communication with citizens with things as to what to do
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P94 anonymous

February 3, 2022 3:53 PM - 00:15:40 - London, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

storms have taken out power to my residence. trees have been taken down and roadways damanged due to terrential rain

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Wildfire
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Erosion
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

flooding and severe winter weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

removed dead and larger trees that pose a threat to my residence. cleaned out ditch line in front of my property to allow water to flow easier.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

I live in away from the town limits.. out in the very rural area and local government should review these areas and place a priority on these areas as they do the town limits. By checking the current road conditions - paved and gravel - to be sure people in these areas can evacuate if necessary or rescue personnel can reach them - make sure these areas are on the regular patrol list for police departments - all the things that are taken for granted that happen in the towns do not happen for the rural residents of the county

- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain: see previous answer
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P95 michalerwilliams@gmail.com

February 3, 2022 4:30 PM - 00:37:07 - Monroe, United States - Android 7.0 - Chrome 96

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Florence significant damage to home.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Electromagnetic Pulse (EMP)

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Excessive Heat

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

- -Flooding: because creeks and drainage culverts are not routinely cleared to allow excessive water to flow uninhibited, thus flood water exceeds boundaries and property damage, potential injury/loss of life occur.
- -Loss of confidence in local government: due to failure of communication from Local gov with county residents. Silence breeds distrust. Loss of confidence in local government results in non-compliance with directions and requested actions during natural and civil disasters, potentially resulting in civil unrest.
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

I have worked hard to make my home and property resistant to hazards. I have campaigned within my community for nearly two years attempting to rally our area to come together to make our entire community more resistant but the community has shown zero interest, does not attend organizational meetings, does not participate in educational opportunities. The standard response has been, "That's why we have a fire department". This attitude is proliferated by the local fire department itself as the Volunteer firemen say, "We at the fire department manage emergencies.".

I dread the day that a catastrophic event happens locally.

A small, local, poorly equipped, largely untrained, volunteer fire department is absolutely not able to respond to a large, widespread, compounded hazard event when mutual aid is NOT available. Sadly, the county citizens have exhibited no desire to educate and exercise training to be a help and not hindrance to an overwhelmed small local volunteer FD.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Email monthly newsletter.
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Communicate consistently (2-3 times a week) with the county residents using social media. Develop and nurture an open and welcoming communication line so that confidence and trust are established. Appoint a professional county PIO to communicate important information for all departments of the county, to include emergency services. Collaborate weekly with the local newspaper with FREE tips and educational opportunities for county residents.

Public recognition of EMS personnel for outstanding job performance to encourage and attract more emergency specialist personnel.

Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:

Encourage, publicize, oversee, organize, and participate in training with professional EMS teams for two county CERT teams, West and East.

Develop a community information fusion net and neighborhood portals, training these PODS on radio acqusition and use. Encourage Amatuer Radio Licensing and set up functioning clubs with HARDENED equipment.

Offer targeted community training opportunities to encourage participation.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Michale Letterman-Williams

Michalerwilliams@gmail.com

P96 anonymous

February 3, 2022 6:23 PM - 00:03:31 - Charlotte, United States - Windows 10 - Edge 95

Q1 1. Where do you live?

Rockingham

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

weather

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

generator, rocks for footing

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: facebook
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P97 anonymous

February 4, 2022 1:43 AM - 00:16:21 - Wadesboro, United States - iOS 15.2.1 - Mobile Safari 15

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Snow storm 2000.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Electromagnetic Pulse (EMP)

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

GANGS

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

More Guns - More Ammo

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Lock the criminals up

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Lee Roy Lookabill. leelookabill@yahoo .com

P98 anonymous

February 4, 2022 4:43 AM - 00:04:55 - Rockingham, United States - iOS 15.2.1 - Mobile Safari 15

Q1 1. Where do you live?

Ellerbe

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

None

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P99 anonymous

February 4, 2022 2:00 PM - 00:08:02 - Rockingham, United States - Windows 10 - Chrome 98

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Storms, heavy rain, flooding

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Infectious Disease

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Flooding

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Too expensive

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Checked to make sure house was secure

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
 Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P100 jimmyoh5456@outlook.com

February 4, 2022 3:29 PM - 00:09:52 - Rockingham, United States - iOS 15.1 - Mobile Safari 15

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Had trees blown down during hurricane Florence also those shingles taken from my roof

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Drought

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Had a lot of landscaping remove

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Put in guidelines for all homes should have their own solar panel and generator supplied by other local Power companies

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P101 marsh.julie@anson.k12.nc.us

February 4, 2022 4:57 PM - 00:12:34 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Bad hurricane and affected from snow in 2002

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Not important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Not important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Julie Marsh

P102 liles.mary@anson.k12.nc.us

February 4, 2022 5:06 PM - 00:05:01 - Wadesboro, United States - Windows 10 - Chrome 97

```
Q1 1. Where do you live?
Wadesboro
Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery,
Richmond, or Scotland County?
Yes
Q3 3. If "Yes," please explain.
snow and hurricane
Q4 5. How concerned are you about the possibility of your community being impacted by a
disaster?
Somewhat concerned
Q5 5. Please select one hazard you think is the highest threat to your neighborhood:
Severe Winter Weather
Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:
Severe Winter Weather
Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If
so, please explain:
no
    8. Is your home located in a floodplain?
No
Q9
    9. Do you have flood insurance?
No
     10. If you do not have flood insurance, why not?
Not necessary because it never floods
Q11 11. If "Other," please explain:
no
Q12 12. Have you taken any steps to make your home or neighborhood more resistant to
hazards?
Yes
Q13 13. If "Yes," please explain:
no
```

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P103 anonymous

February 4, 2022 5:49 PM - 00:11:15 - Rockingham, United States - Windows 10 - Edge 97

Q1 1. Where do you live?

Peachland

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Flooding
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Land and air pollution

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

We recently replaced a drainage pipe being fed by two sources.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P104 anonymous

February 5, 2022 7:06 PM - 00:04:37 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Flooding
- Q8 8. Is your home located in a floodplain?

Nο

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P105 anonymous

February 6, 2022 12:22 AM - 00:11:21 - Indian Trail, United States - Chromium OS 14324.80.0 - Chrome 97

Q1 1. Where do you live?

Morven

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

weather impacted with power outage to long.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

people making meth in homes.

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

I need to check my plan.

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

I always check the surroundings and keep the areas clean and free of dangerous material.

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

- Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

 Mail
- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: email
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood? have a community watch meeting.
- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain: n/a
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P106 boggan.kenjii@anson.k12.nc.us

February 6, 2022 3:14 AM - 00:06:02 - Indian Trail, United States - iOS 15.2 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

I can't really remember when but it was during the time we had heavy snow.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Winter Weather

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Infectious Disease

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

No

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain:
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Kenjii Boggan

Boggan.kenjii@anson.k12.nc.us

P107 anonymous

February 7, 2022 3:59 PM - 00:03:06 - Rockingham, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Tornado

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because it never floods

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

New home, new smoke and CO2 detectors.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain: N/A
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Somehwat important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P108 jdbowers2000@yahoo.com

February 7, 2022 4:38 PM - 00:07:07 - London, United States - Mac OS 10.15 - Firefox 96

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

The hurricane a few years ago flooded all the bridges. I also had to work during that time and the roads were mostly flooded out every where in the county.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

These days, cyber attacks, have already hit our local government.

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

I'm on the fire department in my community and while we run calls and do other fire department-related activities in our area, we notify DOT if we see any trees that have the potential to fall on lines or block roadways.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

- Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?
- Internet (including social media)
- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Id like to be e,ailed from our local emergency management
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Be proactive and notify county resources immediately. More funding for the groups that deal with those problems.

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P109 marysb49@yahoo.com

February 8, 2022 3:06 AM - 02:29:06 - Indian Trail, United States - Windows 10 - Edge 98

Q1 1. Where do you live?

Peachland

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

Covid-19, and all other variants

Q8 8. Is your home located in a floodplain?

Nο

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?
- 1. Provide hazard mitigation strategy, 2. Pre event preparedness, 3. Public education & awareness 4. FEMA"s
- Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:

 Not at this time

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

Q26 This survey may be submitted anonymously; however, if you provide us with your name and contact information below, we will have the ability to follow up with you to learn more about your ideas or concerns. (Optional)

Mary Ruth Burns 704 475 4067

P110 anonymous

February 8, 2022 7:11 PM - 00:01:15 - London, United States - Windows 10 - Edge 98

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Infectious Disease

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

Just really getting a job that I can afford it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P111 anonymous

February 8, 2022 7:27 PM - 00:06:08 - London, United States - Windows 10 - IE 11

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

A disaster from a snow storm years ago left us without electricity for two weeks

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Thunderstorms/High Wind

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

Yes

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

Purchased new windows

Keep debris away from around home

Stock up on items needed for disaster

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P112 anonymous

February 8, 2022 7:32 PM - 00:35:27 - London, United States - Windows 10 - Edge 98

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

low water bridge. The water covers this bridge if we have heavy rains hurricanes.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Flooding
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind
- Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Other

Q11 11. If "Other," please explain:

I dont know what is considered as flooding area.

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Public Workshops/Meetings

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P113 anonymous

February 8, 2022 8:30 PM - 00:05:29 - Wadesboro, United States - Windows 10 - Chrome 97

Q1 1. Where do you live?

Polkton

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Drought
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Hazardous Substances
- Q8 8. Is your home located in a floodplain?
- Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

Q17 17. Are there any other ways you prefer to receive information? If so, please explain: email

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Not important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

P114 anonymous

February 9, 2022 5:12 PM - 00:26:33 - Rockingham, United States - Windows 10 - Chrome 98

Q1 1. Where do you live?

Lilesville

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hurricane Hugo

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Flooding

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Erosion

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

I'm not sure

Q10 10. If you do not have flood insurance, why not?

Other

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?

Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P115 anonymous

February 9, 2022 6:24 PM - 00:09:13 - London, United States - Windows 10 - Chrome 98

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

2000 SNOW STORM

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood: Lightning
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Lightning
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P116 anonymous

February 10, 2022 6:28 PM - 00:05:12 - Indian Trail, United States - Windows 7 - Firefox 97

Q1 1. Where do you live?

Peachland

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Drought
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Somewhat important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)

Somewhat important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Somewhat important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Somewhat important

P117 anonymous

February 10, 2022 7:28 PM - 00:15:06 - London, United States - Windows 10 - Edge 98

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Extremely concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Tornadoes

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Severe Thunderstorms/High Wind

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

no

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Too expensive

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Yes

Q13 13. If "Yes," please explain:

New roof, new insulation, working on new windows, and old basement bring it up to code.

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Mail

no

Q17 17. Are there any other ways you prefer to receive information? If so, please explain:

Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Continue to keep all local politicians, county commissioners, department heads, and citizens educated, trained, and informed continuously.

Q19 19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disaster in the community that you think are important? If so, please explain:

Providing free hazard or disaster assessments to all citizens that are willing to participate. These assessments will provide vital information to the homeowners on what they need to do to make sure they are ready for any hazards or disasters before they accrue.

Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.

20. Prevention - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P118 anonymous

February 17, 2022 3:29 PM - 00:04:44 - London, United States - Windows 10 - Edge 98

Q1 1. Where do you live?

Rockingham

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Power outages during hurricanes

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not necessary because I am elevated or otherwise protected

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Nο

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Television

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important

- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Somewhat important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P119 anonymous

February 21, 2022 4:16 PM - 00:04:20 - London, United States - Windows 10 - Edge 98

Q1 1. Where do you live?

Unincorporated Anson County

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

No

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Not concerned

- Q5 5. Please select one hazard you think is the highest threat to your neighborhood:
 Cyber Attack
- Q6 6. Please select one hazard you think is the second highest threat to your neighborhood: Infectious Disease
- Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards?
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

No

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.)
Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Very important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P120 jgboylin@gmail.com

February 22, 2022 1:29 AM - 03:35:45 - Indian Trail, United States - Mac OS 10.13.6 - Chrome 98

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Hugo

Snow and Ice storms over the years.

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:
Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Hurricane and Coastal Hazards

Q8 8. Is your home located in a floodplain?

No

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Not located in floodplain

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

Nο

Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes

Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Newspaper

- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

 pay attention to current hazards
- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Q21 21. Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area.

(Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Very important

Q22 22. Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

Very important

Q23 23. Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Somewhat important

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Very important

P121 anonymous

March 10, 2022 5:02 PM - 00:08:21 - London, United States - Windows 10 - Edge 99

Q1 1. Where do you live?

Wadesboro

Q2 2. Have you ever experienced or been impacted by a disaster in Anson, Montgomery, Richmond, or Scotland County?

Yes

Q3 3. If "Yes," please explain.

Heay wind and rain from storm fronts; tornadoes--down tree limbs--flooded driveway and yard

Q4 5. How concerned are you about the possibility of your community being impacted by a disaster?

Somewhat concerned

Q5 5. Please select one hazard you think is the highest threat to your neighborhood:

Severe Thunderstorms/High Winds

Q6 6. Please select one hazard you think is the second highest threat to your neighborhood:

Severe Winter Weather

Q7 7. Are there any other hazards that you feel pose a wide-scale threat to your community? If so, please explain:

health concerns--not as much access to fresh fruits and vegetables. No public transportation. Lack of medical care and treatment for many sick people

Q8 8. Is your home located in a floodplain?

I'm not sure

Q9 9. Do you have flood insurance?

No

Q10 10. If you do not have flood insurance, why not?

Never really considered it

Q12 12. Have you taken any steps to make your home or neighborhood more resistant to hazards?

No

- Q14 14. Are you interested in making your home or neighborhood more resistant to hazards? Yes
- Q15 15. Do you know what office to contact to find out how to reduce your risks to hazards in your area?

Yes

Q16 16. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?

Internet (including social media)

- Q17 17. Are there any other ways you prefer to receive information? If so, please explain: Prefer email or text message. I don't use SOCIAL MEDIA as much.
- Q18 18. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?

Explain the hazardous risks to each town. Most people do not think about this need. Discuss it at Board of Commissioners meetings. Send information out on blast calls or social media for those that use these tools

- Q20 A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. In the next six questions, please tell us how important you think each one is for your community to consider pursuing.
- 20. Prevention Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Very important

- Q21 21. Property Protection Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area. (Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.) Somewhat important
- Q22 22. Natural Resource Protection Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. (Examples include: floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.)

 Very important
- Q23 23. Structural Projects Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard.

(Examples include dams, levees, detention/retention basins, channel modification, retaining walls and storm sewers.)

Q24 24. Emergency Services - Actions that protect people and property during and immediately after a hazard event.

(Examples include warning systems, evacuation planning, emergency response training, and protection of critical emergency facilities or systems.)

Vert important

Q25 25. Public Education and Awareness - Actions to inform citizens about hazards and the techniques they can use to protect themselves and their property.

(Examples include outreach projects, school education programs, library materials and demonstration events.)

Neighboring Jurisdictions for the Pee Dee Lumber Region

Jurisdiction	Name	Title	Email
Stanly County	Michael Roark	Emergency Services Director	mroark@stanlycountync.gov
	Bob Remsburg	Planning Director	bremsburg@stanlycountync.gov
Union County	Andrew Ansley	EM Director	andrew.ansley@unioncountync.gov
	Lee Jenson	Planning	lee.jenson@unioncountync.gov
Davidson County	Alton Hanes	EM Director	Alton.Hanes@DavidsonCountyNC.gov
	Scott Leonard	Planning	Scott.Leonard@DavidsonCountyNC.gov
Randolph County	Christie McCorquodale	EM Director	<u>Chrisite.McCorquodale@randolphcountync.gov</u>
	Jay Dale	Planning	<u>Jay.Dale@randolphcountync.gov</u>
Moore County	Scot Brooks	EM Director	sbrooks@moorecountync.gov
	Debra Ensminger	Planning	densminger@moorecountync.gov
Hoke County	Bryan Marley	EM Director	bmarley@hokecounty.org
	Jackie Lowery	Planning	jlowery@hokecounty.org
Robeson County	Stephanie Chavis	EM Director	stephanie.chavis@co.robeson.nc.us
Marlboro County, SC	Steve Akers	EM Director	s.akers@marlborocounty.sc.gov
Chesterfield County	Chad Arant	EM Director	<u>carant@chesterfieldcountysc.com</u>

Nathan Slaughter

From: Nathan Slaughter

Sent: Thursday, May 26, 2022 11:11 AM

To: mroark@stanlycountync.gov; bremsburg@stanlycountync.gov; andrew.ansley@unioncountync.gov;

lee.jenson@unioncountync.gov; Alton.Hanes@DavidsonCountyNC.gov;

Scott.Leonard@DavidsonCountyNC.gov; Chrisite.McCorquodale@randolphcountync.gov;

Jay.Dale@randolphcountync.gov; sbrooks@moorecountync.gov; densminger@moorecountync.gov;

bmarley@hokecounty.org; jlowery@hokecounty.org; stephanie.chavis@co.robeson.nc.us;

s. a kers@marlborocounty.sc.gov; carant@chesterfieldcountysc.com

Subject: NOTIFICATION: Pee Dee Lumber NC Regional Hazard Mitigation Plan

Importance: Low

Good morning

You are receiving this email because a neighboring County (Anson, Montgomery, Richmond, and/or Scotland, NC), along with the municipalities within those counties and other participating partners, are now working to update the region's multi-jurisdictional Hazard Mitigation Plan as required by the Federal Emergency Management Agency (FEMA). The purpose of this plan is to identify and assess the region's hazard risks and determine strategies for how to best minimize or manage those risks. Upon completion, the plan will represent a comprehensive update to the multi-jurisdictional Hazard Mitigation Plan for the four-county region.

You are being notified of this planning process for two purposes:

- 1. FEMA requires that neighboring jurisdictions be provided an opportunity to be involved in the planning process.
- 2. You may want to contribute information to these jurisdictions to consider as they update their hazard mitigation plan.

I serve as the Project Manager for the update of the plan. Please let me know if you would like to contribute information, be invited to any upcoming meetings in the development of the plan or if you would like to receive a copy of the draft plan.

Should you have any questions about the *Pee Dee Lumber Regional Hazard Mitigation Plan*, please do not hesitate to contact me. Thank you for your time!

Nathan Slaughter, AICP, CFM

Department Manager – Hazard Mitigation **ESP Associates, Inc.**2200 Gateway Centre Boulevard – Suite 216 Morrisville, NC 27560 www.espassociates.com

nslaughter@espassociates.com

919.415.2726 | Direct 919.678.1070 | Office 919.244.9536 | Cell Connect with me on LinkedIn

APPENDIX E COMPLETED MITIGATION ACTIONS

Anson County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)					
	Prevention												
P-11	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.					
P-13	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.					
P-14	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	Section 402 (Suitability of Land), 404 (Flood Damage Protection), and 407 (Water Requirements/Fire) of the subdivision ordinance covers those areas of hazard mitigation, this was approved in 2002, and amended in 2006. Environmental issues are regulated by DENR. Anson County supports and implements state regulations in this area. Anson County has an environmental health department that also deals with health hazards related to our environment.					
P-15	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance					

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
								would allow for clustering.
P-16	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-17	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
			<u>'</u>	Emergency Se	rvices			
ES-1	Ensure adequate warning in case of major hazard events.	All	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	We now have multiple ways to warn public.
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	Generator and switch gear put at shelter location
			Pι	ıblic Education an	d Awareness			
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

Town of Ansonville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	n			
P-10	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.
P-12	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-13	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	Section 402 (Suitability of Land), 404 (Flood Damage Protection), and 407 (Water Requirements/Fire) of the County's subdivision ordinance covers those areas of hazard mitigation. This was approved in 2002, and amended in 2006. Environmental issues are regulated by DENR. Anson County supports and implements state regulations in this area. Anson County has an environmental health department that also deals with health hazards related to our environment.
P-14	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	The County's Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance would allow for clustering.
P-15	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-16	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
				Emergency S	ervices			
ES-1	Ensure adequate warning in case of major hazard events.	All	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	We now have multiple ways to warn public.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	Generator and switch gear put at shelter location
			Pu	blic Education and	d Awareness			
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

City of Lilesville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	n			
P-10	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.
P-12	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-12	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-13	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	Section 402 (Suitability of Land), 404 (Flood Damage Protection), and 407 (Water Requirements/Fire) of the County's subdivision ordinance covers those areas of hazard mitigation. This was approved in 2002, and amended in 2006. Environmental issues are regulated by DENR. Anson County supports and implements state regulations in this area. Anson County has an environmental health department that also deals with health hazards related to our environment.
P-14	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	The County's Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance would allow for clustering.
P-15	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-16	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
				Emergency S	ervices			

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
ES-1	Ensure adequate warning in case of major hazard events.	All	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	We now have multiple ways to warn public
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	Generator and switch gear put at shelter location
			Pu	blic Education an	d Awareness			
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

Town of McFarlan Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	n			
P-10	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.
P-12	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-13	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	Section 402 (Suitability of Land), 404 (Flood Damage Protection), and 407 (Water Requirements/Fire) of the County's subdivision ordinance covers those areas of hazard mitigation. This was approved in 2002, and amended in 2006. Environmental issues are regulated by DENR. Anson County supports and implements state regulations in this area. Anson County has an environmental health department that also deals with health hazards related to our environment.
P-14	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	The County's Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance would allow for clustering.
P-15	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-16	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
			Pu	blic Education an	d Awareness			

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

Town of Morven Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	n			
P-10	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.
P-12	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-13	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	Section 402 (Suitability of Land), 404 (Flood Damage Protection), and 407 (Water Requirements/Fire) of the County's subdivision ordinance covers those areas of hazard mitigation. This was approved in 2002, and amended in 2006. Environmental issues are regulated by DENR. Anson County supports and implements state regulations in this area. Anson County has an environmental health department that also deals with health hazards related to our environment.
P-14	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	The County's Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance
P-15	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	would allow for clustering. Completed.
P-16	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
	TO COME AND PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PR		_	Emergency S	ervices			
ES-1	Ensure adequate warning in case of major hazard events.	All	High	County Emergency	Unknown	Local; State; Federal	Completed 2013.	We now have multiple ways to warn public

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Services				
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	Generator and switch gear put at shelter location
			Pu	blic Education an	d Awareness			
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

Town Peachland Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	on			
P-10	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.
P-12	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-13	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	Section 402 (Suitability of Land), 404 (Flood Damage Protection), and 407 (Water Requirements/Fire) of the County's subdivision ordinance covers those areas of hazard mitigation. This was approved in 2002, and amended in 2006. Environmental issues are regulated by DENR. Anson County supports and implements state regulations in this area. Anson County has an environmental health department that also deals with health hazards related to our environment.
P-14	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	The County's Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance would allow for clustering.
P-15	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-16	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
				Emergency S	ervices			
ES-1	Ensure adequate warning in case of major hazard events.	All	High	County Emergency	Unknown	Local; State; Federal	Completed 2013.	We now have multiple ways to warn public

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Services				
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	Generator and switch gear put at shelter location
			Pu	blic Education and	d Awareness			
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

Town of Polkton Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	n			
P-11	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.
P-13	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-14	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	The County's Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance would allow for clustering.
P-15	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-16	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-17	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
				Emergency So	ervices			
ES-1	Ensure adequate warning in case of major hazard events.	All	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	We now have multiple ways to warn public
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	Generator and switch gear put at shelter location
			Pu	blic Education and	d Awareness			
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

Town of Wadesboro Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	on			
P-10	At next Land Use Plan Update, review and include hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2007-2008	Completed.
P-12	Update the Floodplain Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-13	Update the Subdivision Ordinance by reviewing and incorporating hazard mitigation objectives.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2006-2007	Section 402 (Suitability of Land), 404 (Flood Damage Protection), and 407 (Water Requirements/Fire) of the County's subdivision ordinance covers those areas of hazard mitigation. This was approved in 2002, and amended in 2006. Environmental issues are regulated by DENR. Anson County supports and implements state regulations in this area. Anson County has an environmental health department that also deals with health hazards related to our environment.
P-14	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	The County's Section 205 – Planned Unit Developments (PUD's), included in the 2006 amendments to the subdivision ordinance would allow for clustering.
P-15	Revise and update the regulatory floodplain maps.	Flood	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
P-16	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2005-2006	Completed.
				Emergency S	ervices			
ES-1	Ensure adequate warning in case of major hazard events.	AII	High	County Emergency	Unknown	Local; State; Federal	Completed 2013.	We now have multiple ways to warn public

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Services				
ES-2	Improve shelter capacities with alternate power/heat sources.	Winter Storm	High	County Emergency Services	Unknown	Local; State; Federal	Completed 2013.	Generator and switch gear put at shelter location
			Pu	blic Education an	d Awareness			
PEA-3	Place flood protection and other hazard education materials in all branches of the Anson County public library system.	All	Moderate	County Planning and Zoning	Unknown	Staff time only	2004-2005	Completed.
PEA-4	The Anson County Assistant Manager/County Engineer has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and developer with problems and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	Moderate	County Assistant Manager; County Engineer	Unknown	Staff time only	Ongoing	Completed.

Montgomery County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	n On		Schedule	
P-1	Hire a County Planner.	All	Moderate	County Manager	Unknown	Local	Complete.	Hired a County Planner in 11/1/2012
P-2	Create a County planning department.	All	Moderate	County Manager; County Planner	Unknown	Local	Complete.	Created 11/1/2012 and is staffed by one person.
P-3	Develop mapping ability.	All	Moderate	County Manager; County Planner	Unknown	Local	Completed 2012.	GIS Mapping is now available in 911 addressing and the County Tax Office.
P-6	Develop a countywide growth management/land use plan.	All	Moderate	County Planner	Unknown	Outside funding	Complete.	Completed and adopted in 2010.
P-8	Through local water supply plan, develop a voluntary and mandatory water conservation program for drought conditions.	Drought	Moderate	County Manager	Unknown	Local	Completed 2012.	Have in draft form waiting to be adopted.
P-10	Through existing subdivision regulations, encourage that power, cable and telephone lines be buried.	All	Moderate	County Manager; County Planner	Unknown	Local	Complete.	Completed 2014 by adopting county ordinance for burying lines, and cables in subdivisions.
			•	Emergency S	ervices			
ES-1	Hire an emergency manager.	All	Moderate	County Manager	Unknown	Local	Complete.	Current in place since 12/1/2016.
ES-2	Create a Division for Emergency Management.	All	Moderate	County Manager; County Emergency Manager	Unknown	Local	Complete.	Established 2012
ES-3	Develop an emergency operation plan for the County.	All	Moderate	County Manager; County Emergency Manager	Unknown	Local	Complete.	Completed in 2012 and reviewed yearly by NCEM.
ES-6	Identify, upgrade, map emergency shelters throughout county and municipalities.	All	Moderate	County Manager; County EMS Director	Unknown	Local	Complete.	Completed 2014 when GIS mapping was established.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
ES-8	Put in place a countywide 911 reverse call system for location specific warning to public of impending disaster.	All	Moderate	County 911 Director	Unknown	Federal funding; Homeland Security funds	Complete.	Completed 2017 by using Everbridge.

Richmond County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Prevention	n			
P-3	Examine and update floodplain maps. Gather and evaluate data in comparison to existing maps.	Flood	High	County Planning Director	Unknown	Local	1-2 years	Completed.
P-4	Identify potential flood areas in the County. Gather and evaluate data in comparison to existing maps.	Flood	High	County GIS/Planning Director	Unknown	Local; Federal	1-3 years	Completed.
P-8	Reduce contamination from storm runoff. Enforce water discharge ordinances.	Flood	Moderate	County Health Department Director	Unknown	Local; State	1-5 years	Removed. This is dictated by state law.
P-9	Reduce the amount of debris. Organize community clean up days.	Tornado	High	County Building Inspector	Unknown	Local; Federal	2-3 years	Removed.
P-13	Require the availability of hardened structures in all new trailer parks and existing ones with a capacity of 30 or more units. Pass local ordinance mandating action.	Tornado	High	County GIS/Planning Director	Unknown	Local; Private; Federal	2-5 years	Removed.
P-15	Enforce building codes. Routine building inspections of existing buildings and new construction.	Earthquake	Low	County Building Inspection Director	Unknown	Local	Immediate	Completed.
Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
				Emergency Se	rvices			
ES-5	Increase the amount of relief available to the needy during times of extended heat. Distribute electric fans to those who do not have any means to cool their home.	Drought; Extreme Heat	High	County Social Services Director	Unknown	Local; State; Federal; Utilities	1-5 years	Completed.
ES-6	Increase communications to the public, providing the most lead time possible, with regard to tornado watches and warnings. Install AWOS station in County.	Tornado	Moderate	County Emergency Management Coordinator	Unknown	Local; State; Federal	2 years	Removed.

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
ES-7	Upgrade utility fleets to include 4-wheel drive vehicles. Replace key vehicles with ones with 4-wheel drive as existing vehicles age out of fleet service.	Winter Storm	High	County Public Works Director	Unknown	Local; Private; Utilities	2-5 years	Completed.
ES-8	Increase the number of water points available for fire suppression. Procure funding and approval of land owners.	Wildfire	High	County Emergency Management Coordinator	Unknown	Local; State	2-5 years	Funding not available.
ES-9	Relocate County Ranger Office and equipment to a more central location in the County. Procure land and funding.	Wildfire	Moderate	County Forestry Ranger	Unknown	Local; State	2-5 years	No change. Not yet completed due to lack of funding.
ES-10	Install auxiliary heat in fire/rescue and EMS facilities. Secure funding	Winter Storm	Moderate	County Emergency Management Director	Unknown	Private; State; Federal; Non- profit	2-5 years	Removed.
ES-11	Pre-supply emergency shelters. Secure supply funding.	Tornado	Low	County Red Cross Director	Unknown	Local; State; Federal; Non- profit	3-5 years	No change. This action has not been completed.
				Structural Pro	ojects			
PEA-1	Provide public education to the hazards of drought/extreme heat. Publicize via: distribution of flyers an articles, articles in the local newspaper, and make handouts available at public libraries.	Drought; Extreme Heat	Moderate	County Cooperative Extension	Unknown	Local and Federal funds	1-2 years	Completed.
PEA-3	Increase public awareness of drinking water hazards during/after a flood. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Flood	Moderate	County Health Department Director	Unknown	Local; State; Federal	1-3 years	Completed.
PEA-4	Provide educational opportunities annually for hurricane awareness. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Hurricane	Moderate	County Emergency Management Director	Unknown	Local; State; Federal	1-3 years	Completed

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Original Implementation Schedule	Implementation Status (2012)
PEA-6	Minimize the impact by increasing public awareness as to safety procedures. Distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Tornado	Moderate	County Emergency Services Director	Unknown	Local; State; Federal	1-3 years	Completed.
PEA-7	Coordinate and provide education opportunities for the general public. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Severe Thunderstorm	High	County Emergency Management Coordinator	Unknown	Local; State; Federal; Possibly private	1-3 years	Completed.
PEA-8	Expand the public water system to vulnerable areas of the County. Provide education exposure to the public.	Drought; Extreme Heat	Low	County Public Information Officer	Unknown	Local; State; Federal; Private	1-3 years	Completed.
PEA-9	Increase public awareness of flood safety. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Flood	Moderate	County Emergency Management Director	Unknown	Local; State; Federal	1-3 years	Completed.
PEA-11	Provide education as to the dangers and precautions associated with tornadoes. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Tornado	Moderate	County Emergency Management Coordinator	Unknown	Local; State; Federal	2-3 years	Completed.
PEA-12	Provide education to the public as to the safety procedures related to earthquake. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Earthquake	Low	County Emergency Management Coordinator	Unknown	Local; Sate; Federal; Private; Non-profit	2-5 years	Completed.
PEA-13	Emphasize conservation of electricity. Publicize via: distribution of flyers and articles, articles in the local newspaper, and make handouts available to public libraries.	Drought; Extreme Heat	Moderate	County Cooperative Extension	Unknown	Local; State; Non- profit; Utilities	2-5 years	Removed.

City of Hamlet Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)		
	Prevention									
P-1	Provide cell phones to key City personnel.	All	Moderate	City Mayor	Unknown	Local, State, Federal	Completed 2017.	All department heads have city cell phones.		
P-2	Provide two way radios to key City	All	Moderate	City Mayor	Unknown	Local, State, Federal	Completed 2017.	Both fire and police personnel have twoway radios.		

City of Rockingham Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)			
	Prevention										
P-6	Purchase a global positioning system (GPS) to use in conjunction with the City's geographic information system (GIS). Such GPS will allow for the creation of more accurate data sets for the City's GIS.	All	Low	City Planning Department	Unknown	Internal funds	July 2006	Removed.			
P-7	Place laptop computers in the vehicles of key City personnel to facilitate quicker access to data stored in the City's GIS.	All	Low	All City Department Heads	Unknown	Internal funds; Various grants	July 2007; Continuous	Completed and ongoing.			
	Public Education and Awareness										

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)
PEA-1	Develop and print an information brochure regarding potential hazard locations and the requirements, limitations, or possible consequences for development in such areas. The brochure will also contain information about specific actions that citizens can take to better prepare themselves to deal with a natural disaster. Such brochure can be distributed by the Planning and Inspections Department in City Hall.	All	Moderate	City Planning Department	Unknown	Internal funds	July 2005; Continuous	Removed.
PEA-3	Include information in the City's quarterly newsletter that is mailed to all City residents about potential hazards, hazard areas, mitigation measures in which citizens can engage, and the mitigation measures in which the City is engaged.	All	High	City Administration; City Planning Department	Unknown	Internal funds	July 2005; Annually	Removed.

Scotland County Mitigation Action Plan

Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)
			Preventi	on	_		
Revise and update the regulatory floodplain maps.	Flood	High	County Planning and Zoning	Unknown	Federal; State	2011	Completed.
Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.	All	High	County Building Inspections	Unknown	Local	Completed.	These procedures were practiced in the wake of Hurricane Matthew in 2016
			Property Pro	tection			
Create and maintain a list of repetitive flood loss properties.	Flood	Moderate	County Planning and Zoning	Unknown	Local	Completed 2016.	Data derived from Hurricane Mathew.
			Emergency S	ervices			
Identify alternate Emergency Operations Center locations.	All	High	County Building Inspections; County Emergency Services	Unknown	Local	Completed.	New EOC designed to withstand most events. Secondary EOC location is in EOP Plan at SMH in Dulin Center. New EOC / 911 Center opened in 2014 Operational in Hurricane Matthew
Identify alternate detour routes from major arteries in the County.	All	High	County Building Inspections; County Emergency Services; NCDOT	Unknown	Local	Completed 2016.	NC DOT Re-Routed I- 95 through Scotland County in Hurricane Matthew. County was never advised of plan. Hard to plan locally when higher power takes over infrastructure with no notice.
	Revise and update the regulatory floodplain maps. Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections. Create and maintain a list of repetitive flood loss properties. Identify alternate Emergency Operations Center locations.	Revise and update the regulatory floodplain maps. Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections. Create and maintain a list of repetitive flood loss properties. Identify alternate Emergency Operations Center locations. All Identify alternate detour routes from major arteries in the County.	Revise and update the regulatory floodplain maps. Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections. Create and maintain a list of repetitive flood loss properties. Flood Moderate High High High High Identify alternate Emergency Operations Center locations. All High High	Revise and update the regulatory floodplain maps. Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections. Property Pro Create and maintain a list of repetitive flood loss properties. Flood High County Building Inspections All High County Building Inspections County Building Inspections Emergency S County Planning and Zoning All High County Building Inspections County Planning and Zoning County Planning and Zoning All High County Building Inspections; County Emergency Services County Building Inspections; County Emergency Services County Building Inspections; County Building Inspections; County Emergency Services	Revise and update the regulatory floodplain maps. Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections. Property Protection Create and maintain a list of repetitive flood loss properties. Flood Moderate County Building Inspections Woderate County Planning and Zoning Unknown Property Protection County Planning and Zoning Unknown All High County Building Inspections; County Planning and Zoning County Planning Inspections; County Planning Inspection	Revise and update the regulatory floodplain maps. Revise and update the regulatory floodplain maps. Flood High County Planning and Zoning Inspections; County Planning and Zoning Inspections. Flood High County Planning Inspections Unknown Local Inspections of first come, first serve basis; 4) work overtime to expedite utility reconnections. Flood Moderate County Planning Inspections; County Planning I	Revise and update the regulatory floodplain maps. Revise and update the regulatory floodplain maps. Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utillities restored; 2) restrict travel as necessary while collecting damage assessment data; 3) conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections. The property

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	County Planning and Zoning	Unknown	Local	When funding becomes available	Completed. Action completed in 2011.

Town of East Laurinburg Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)		
	Prevention									
P-6	Revise and update the regulatory floodplain maps.	Flood	High	County Planning and Zoning; East Laurinburg	Unknown	Federal; State	When funding becomes available	Completed. This action was completed in 2011.		
			Pu	blic Education and	d Awareness					
PEA-1	Place flood protection and other hazard education material in all branches of the Scotland County public library system.	All	High	County Planning and Zoning; East Laurinburg	Unknown	Local	When funding becomes available	Completed.		

Town of Gibson Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)		
	Prevention									
P-6	Revise and update the regulatory floodplain maps.	Flood	High	County Planning and Zoning; Gibson	Unknown	Federal; State	When funding becomes available	Completed.		
			Pu	blic Education and	d Awareness					
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	County Planning and Zoning; Gibson	Unknown	Local	When funding becomes available	Completed.		

City of Laurinburg Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)
-"		Addressed	· · ·	blic Education an		<u> </u>	Seriedaie	314143 (2012)
P-5	Review and revise the Planning Ordinance to allow for clustering of residential lots.	Flood	Moderate	Laurinburg Planning and Zoning	Unknown	Local	Delete	Not a practice addressed in UDO update. Not seen as a necessary requirement at this time based on lack of local development
P-7	Building inspections for flood damaged structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood related damage as well as other conditions that may be dangerous to life, health, or other property. Plan for damage structures: 1. Overall damage assessment/data collection (visual inspection from roadways). 2. Data compiled and geographical areas assigned to teams. 3. Second detailed assessment by area teams. 4. Portions of walls, floors, ceilings, etc. that have been exposed to water will be opened for evaluation. 5. All construction that is repaired, replaced, dried, or sealed will be inspected for certificate of compliance. 6. Structure inspected for certificate of cortificate of compliance.	Flood	High	County Building Inspections; Laurinburg	Unknown	Local	Completed 2016.	All Building inspection done by County Building Inspection Dept. No flood damage situations required in this event. Large number of electrical reconnects were required in this event and were each inspected by County Inspection Dept.
P-8	Policy procedures related to storm damage and disconnected utility service: 1) inform public via television, radio, and newspaper of the necessary steps to have utilities restored; 2) restrict travel			County Building			Completed 2016.	City of Laurinburg is an "Electria City" receiving electricity from Duke Power. All reconnects within the City of
		All	High	Inspections; Laurinburg	Unknown	Local		Laurinburg are the responsibility of the

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)
	conduct inspections on first come, first serve basis; 4) work overtime to expedite utility reconnections.							City of Laurinburg Electric Crews. Reconnect inspection were performed by County Building inspectors. Process in place and working.
P-9	Create a zoning map (digital) that can be easily reproduced/updated for staff and public use.	All	High	County Planning and Zoning; Laurinburg	Unknown	Local	Completed 2016.	Completed by City GIS Dept. Done by City GIS Department as needed.
				Emergency S	ervices			
ES-4	Identify alternate Emergency Operations Center locations.	All	High	County Building Inspections; County Emergency Services; Laurinburg	Unknown	Local	Completed	Secondary EOC location established in 2006. New EOC should not need back up location. Alternate location for EOC is the Dulin Center at SMH.
			Pu	blic Education ar	nd Awareness			
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	Laurinburg Planning and Zoning	Unknown	Local	When funding becomes available	Completed.
PEA-2	The Scotland County Environmental Health has received training on erosion and sedimentation control methods and on floodplain surveying certification. On an annual basis, this person makes numerous site visits to assist property owners and potential problems associated with drainage, erosion, and flooding. Site visits are made at the request of the property owner or developer and are usually handled through the Planning and Zoning Department.	Flood	High	County Environment al Health Director; Laurinburg	Unknown	Local	Completed 2016.	Done as a Scotland County Function. Scotland County provides all public health services for the City of Laurinburg
PEA-3	Coordinate with County Emergency Services to provide hazard mitigation information to citizens via website	All	Moderate	Laurinburg; County Emergency	Unknown	Local	Completed 2016.	County EM had previous Hazard Mitigation plan on Public Safety web

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)
				Services				site. County has new web site and new revised Hazard Mitigation plan will be added to the new site.

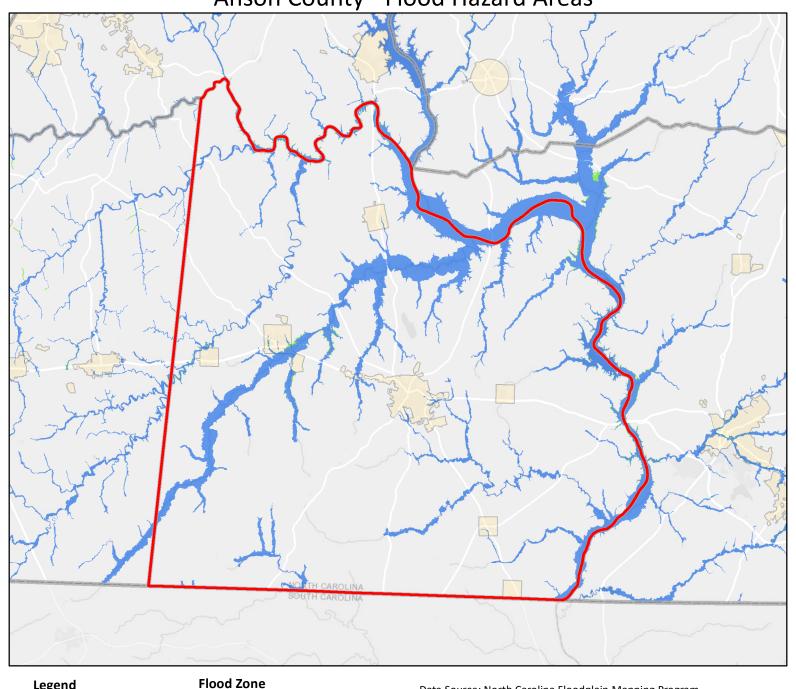
Town of Wagram Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Estimated Cost	Potential Funding Sources	Implementation Schedule	Implementation Status (2012)		
	Public Education and Awareness									
PEA-1	Place flood protection and other hazard education materials in all branches of the Scotland County public library system.	All	High	County Planning and Zoning; Wagram	Unknown	Local	When funding becomes available	Competed. Action completed in 2011.		

Appendix F Flood Hazard Maps

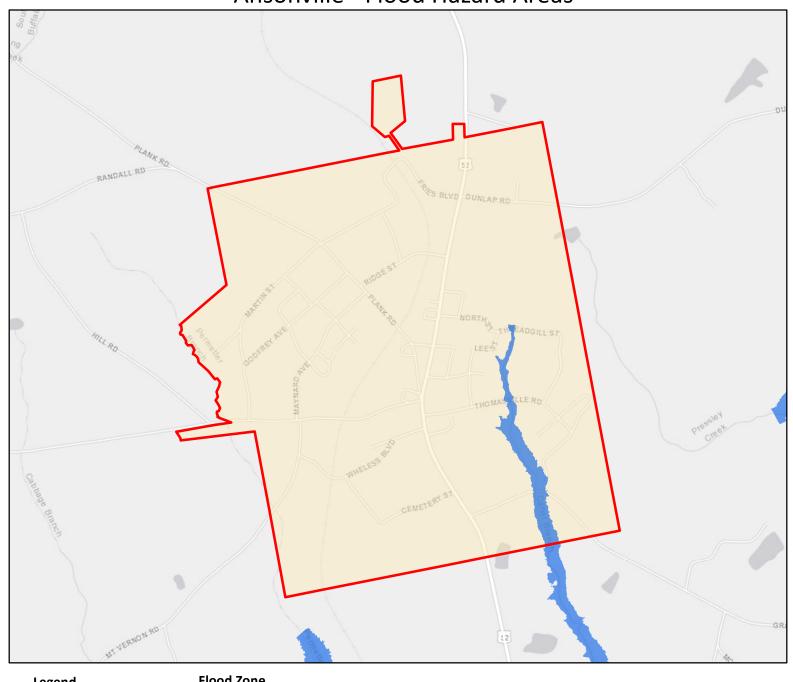
This Appendix includes flood hazard maps for each of the participating jurisdictions.

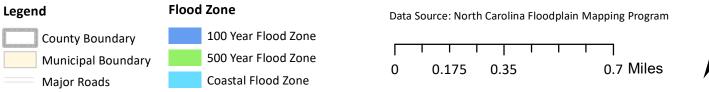
Anson County - Flood Hazard Areas





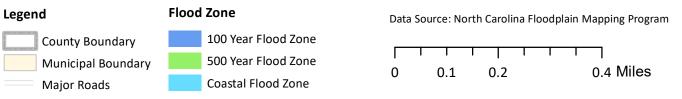
Ansonville - Flood Hazard Areas





Lilesville - Flood Hazard Areas



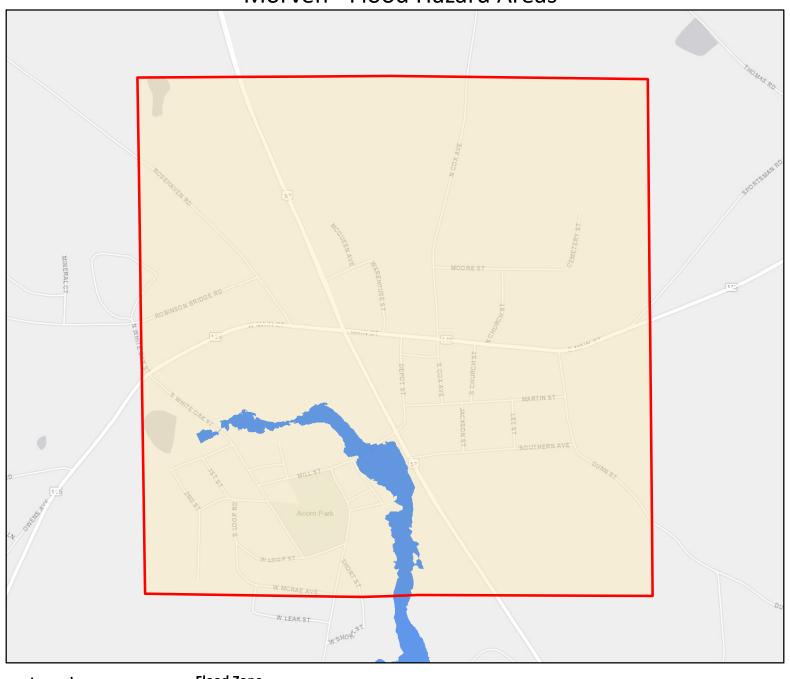


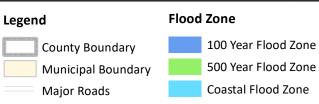
McFarlan - Flood Hazard Areas

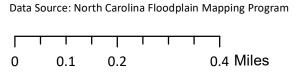




Morven - Flood Hazard Areas

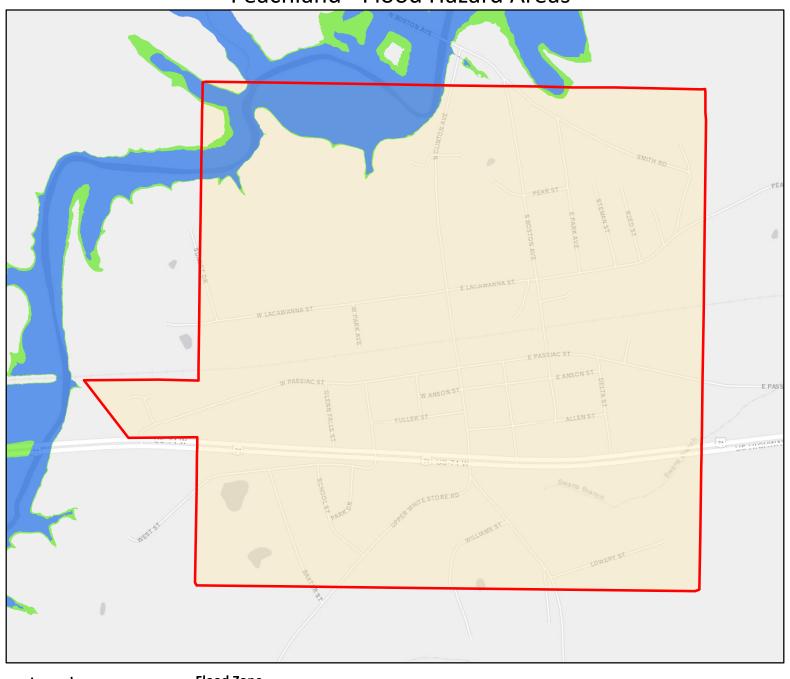


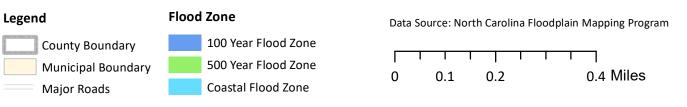






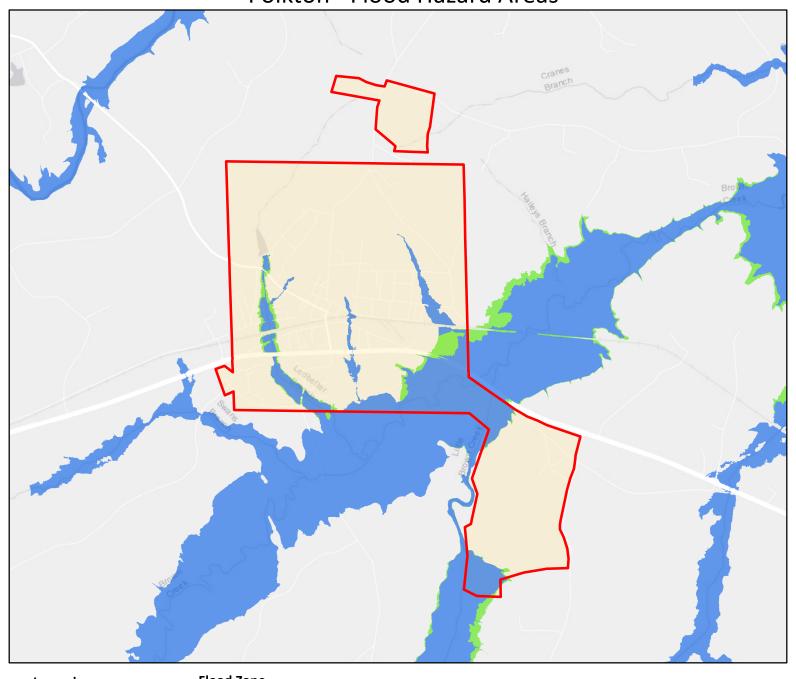
Peachland - Flood Hazard Areas

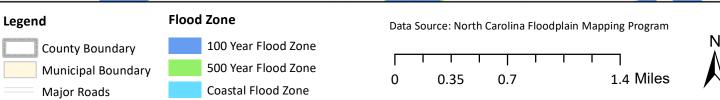




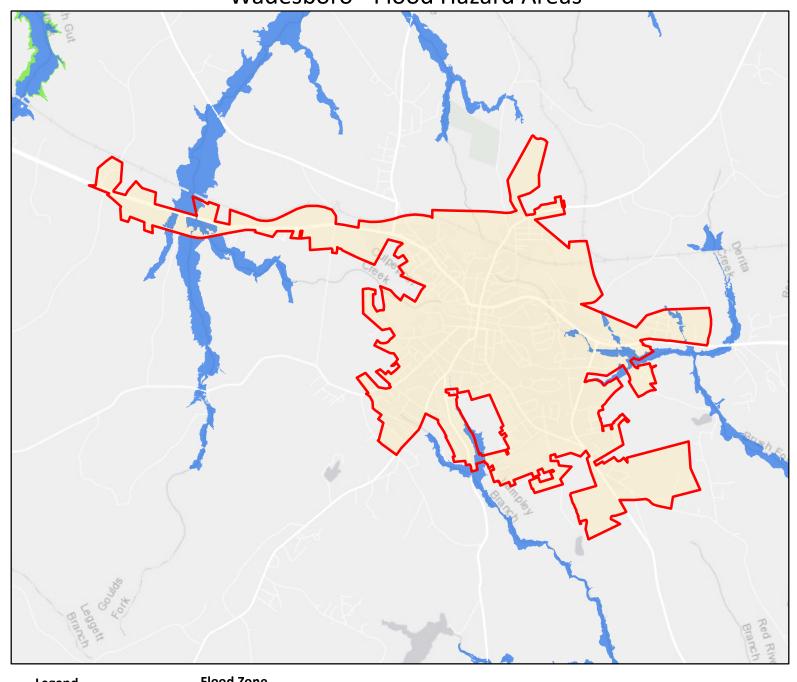


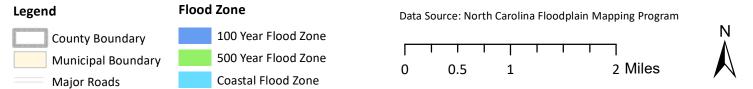
Polkton - Flood Hazard Areas



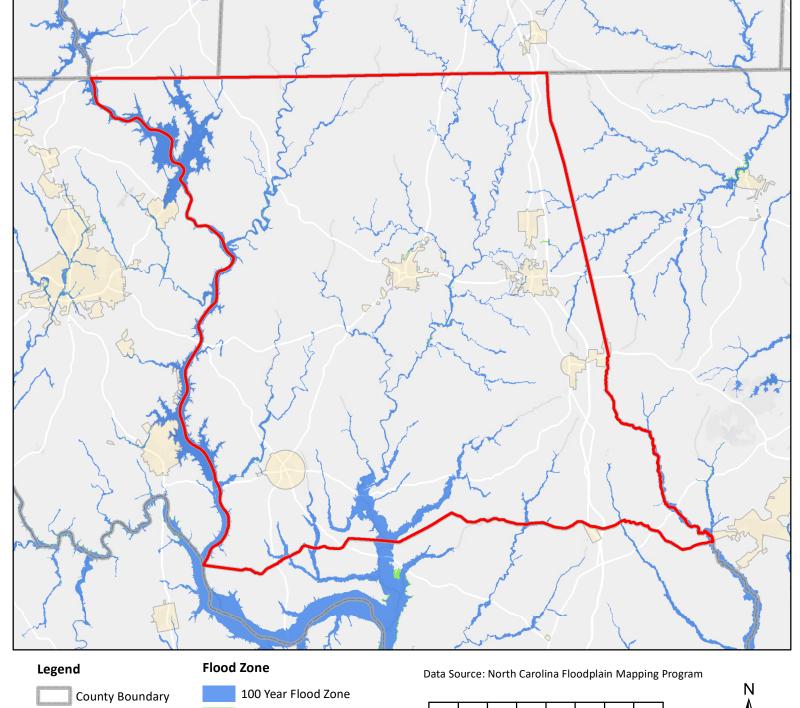


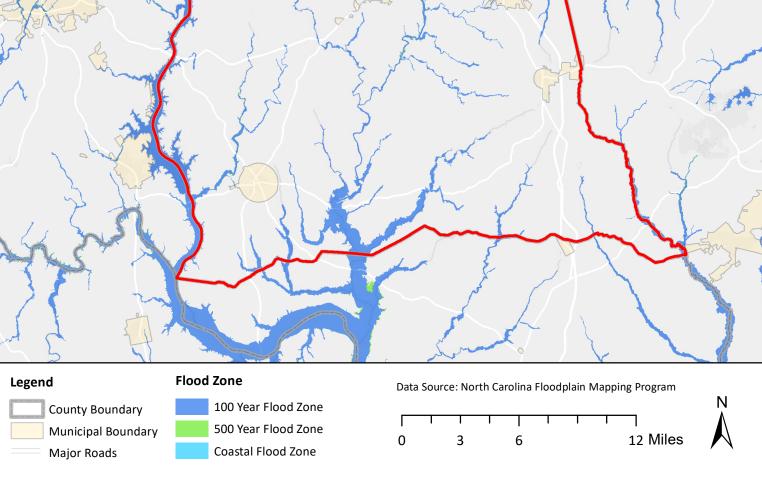
Wadesboro - Flood Hazard Areas



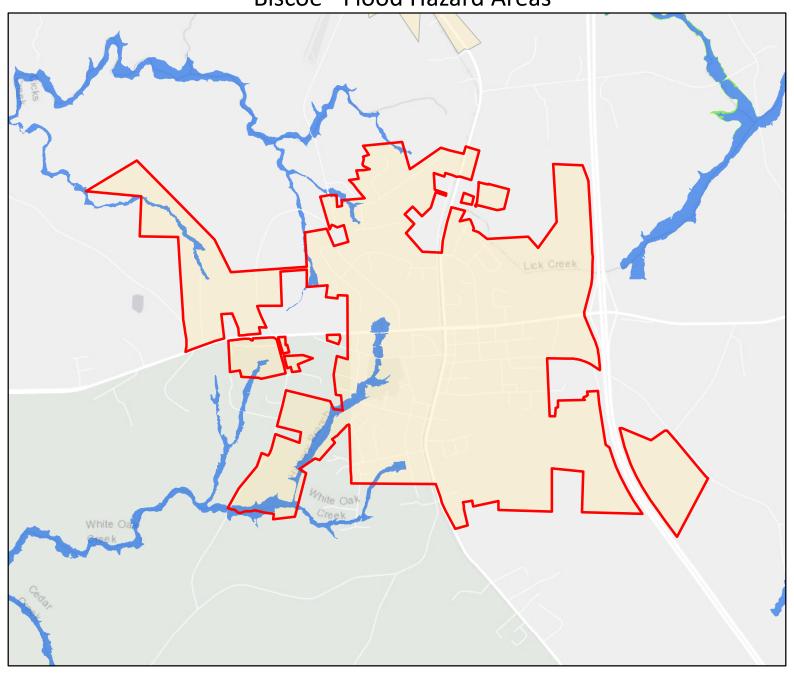


Montgomery County - Flood Hazard Areas



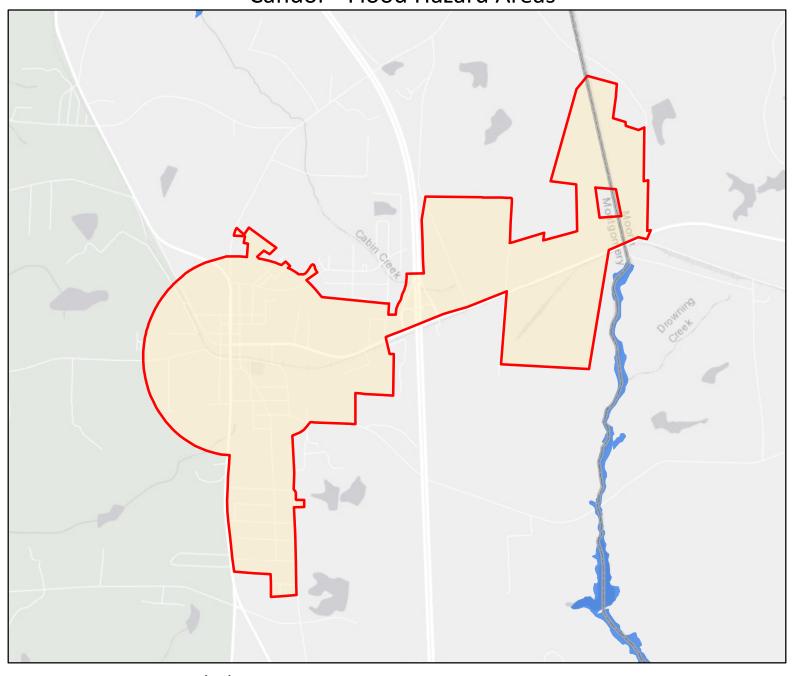


Biscoe - Flood Hazard Areas





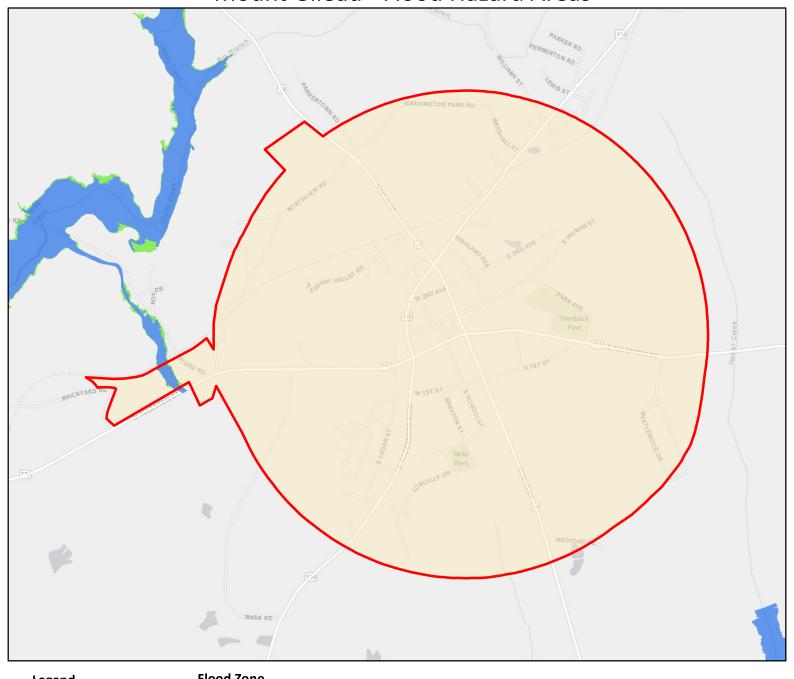
Candor - Flood Hazard Areas

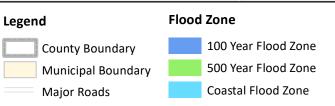


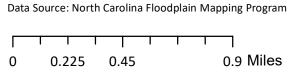




Mount Gilead - Flood Hazard Areas

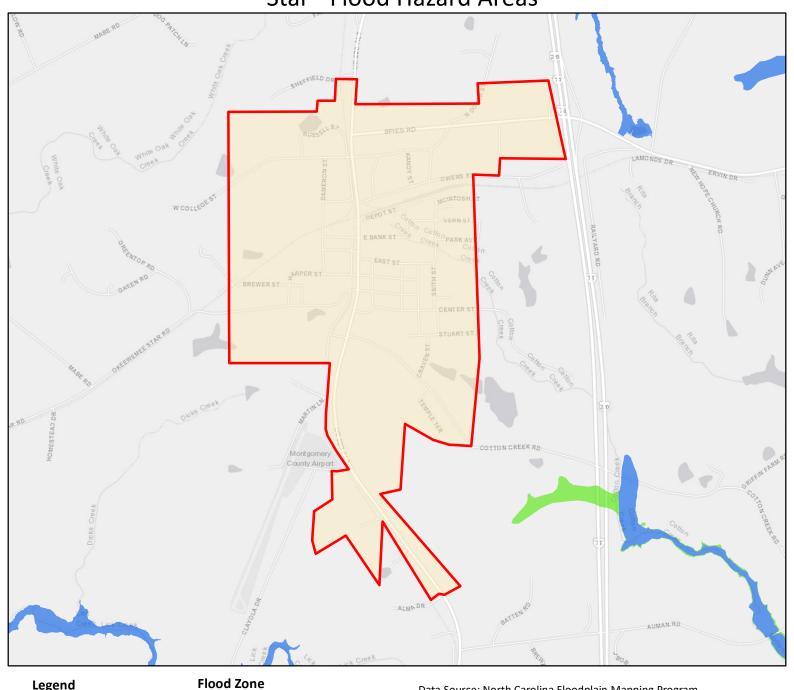


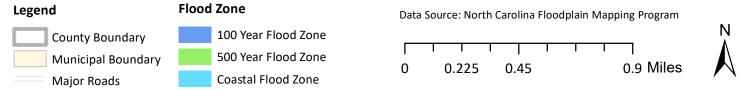




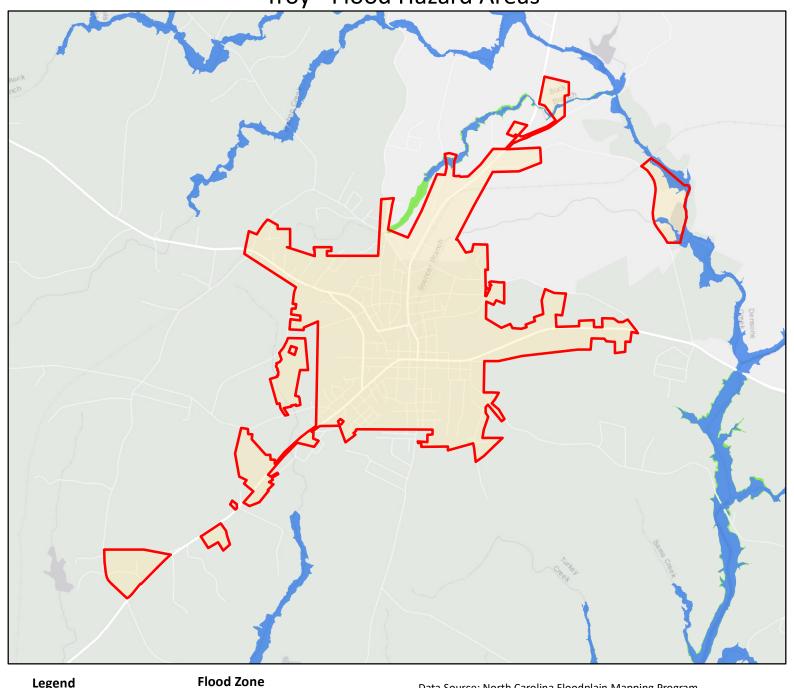


Star - Flood Hazard Areas



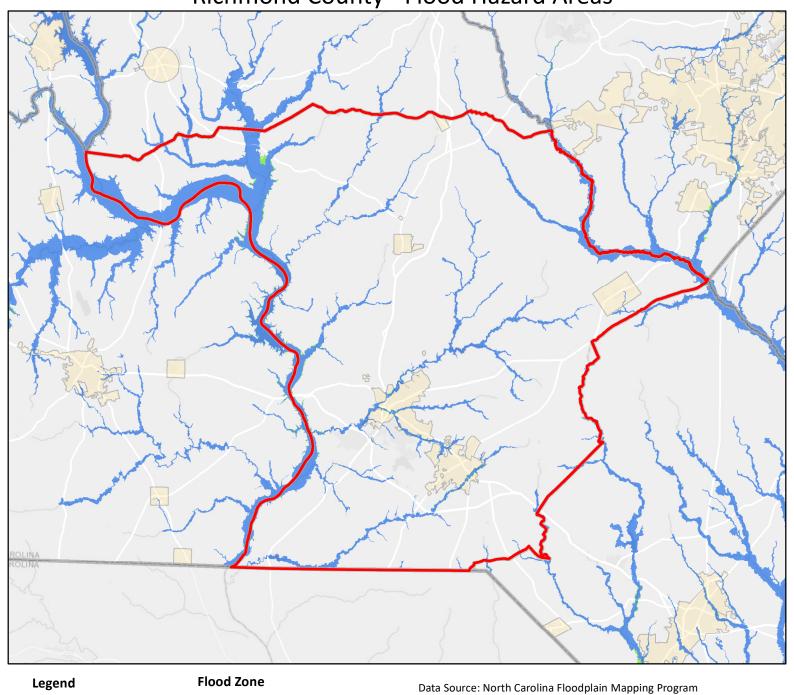


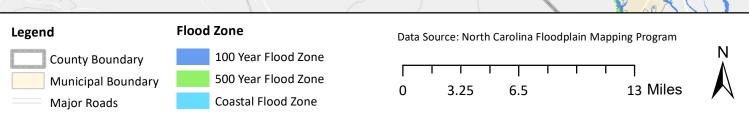
Troy - Flood Hazard Areas



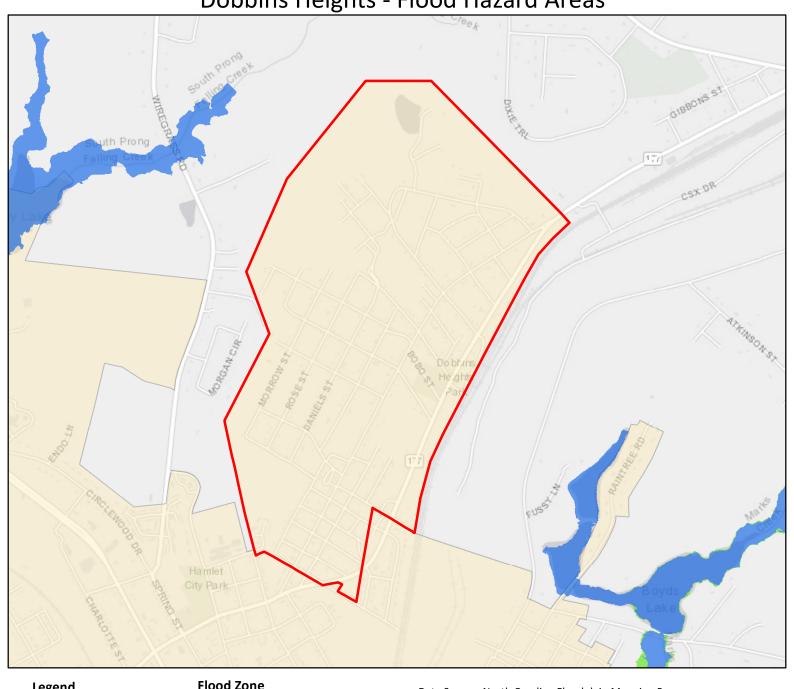


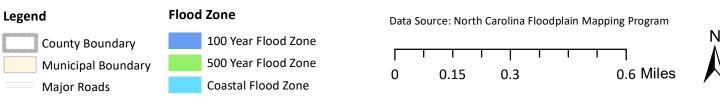
Richmond County - Flood Hazard Areas



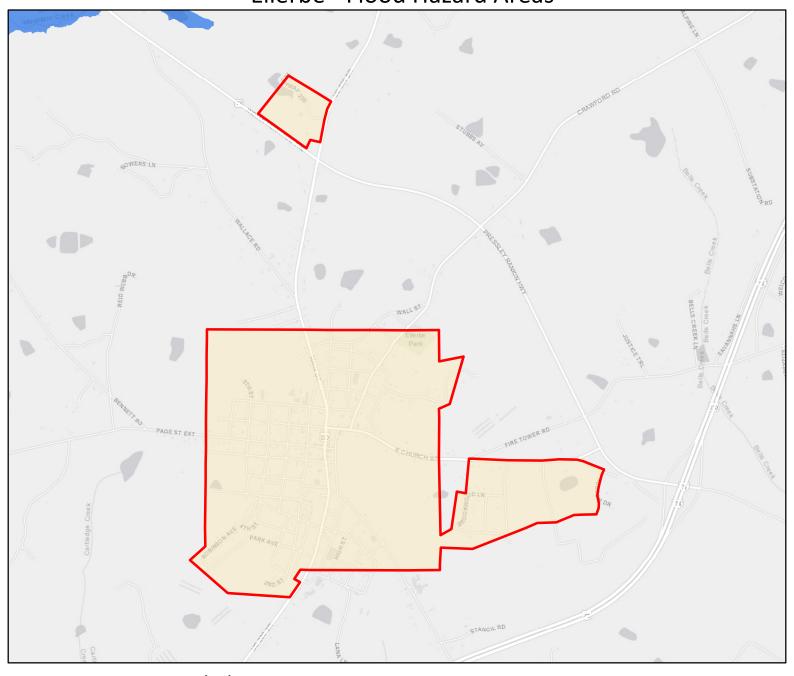


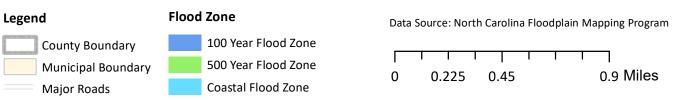
Dobbins Heights - Flood Hazard Areas



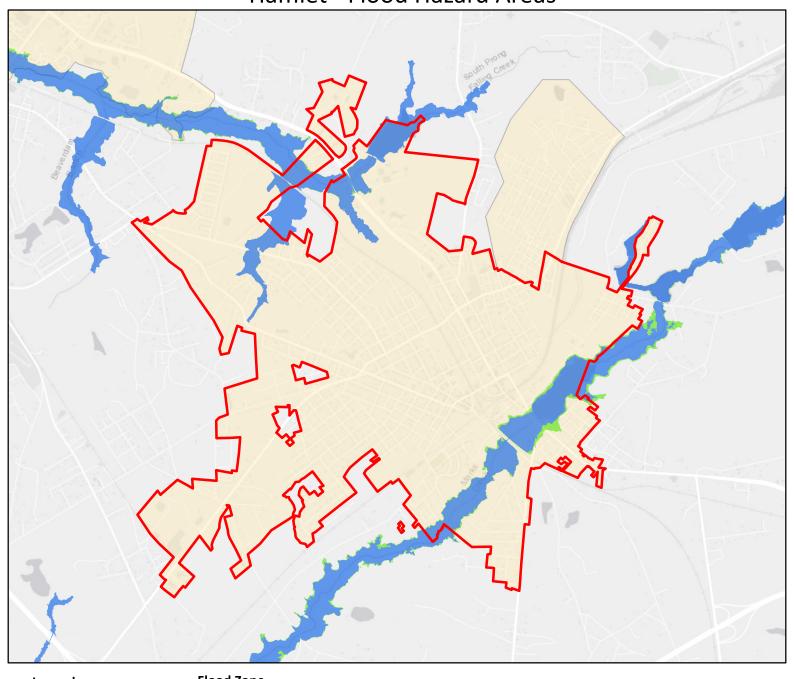


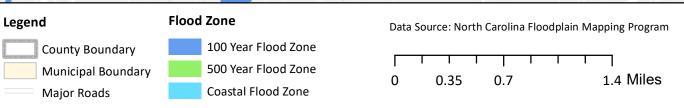
Ellerbe - Flood Hazard Areas



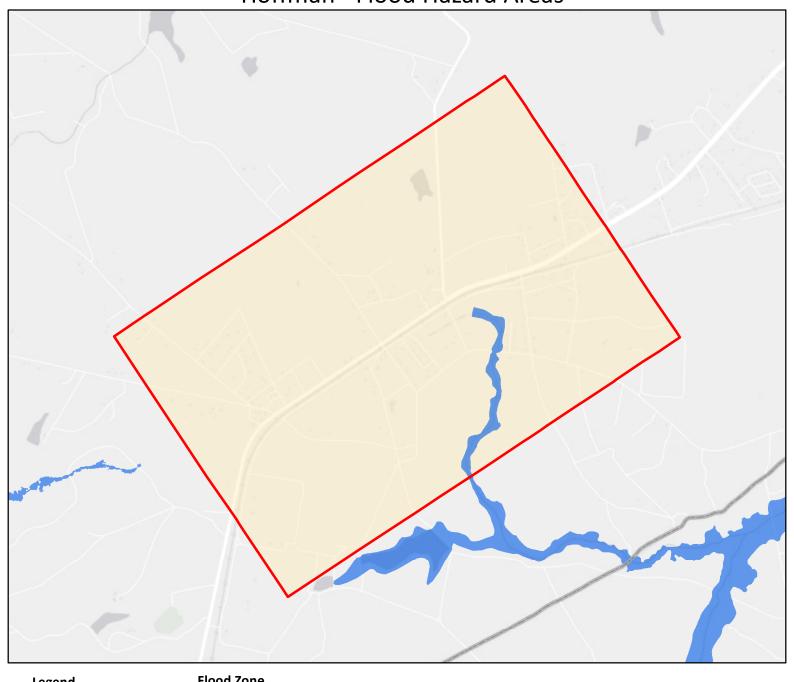


Hamlet - Flood Hazard Areas





Hoffman - Flood Hazard Areas

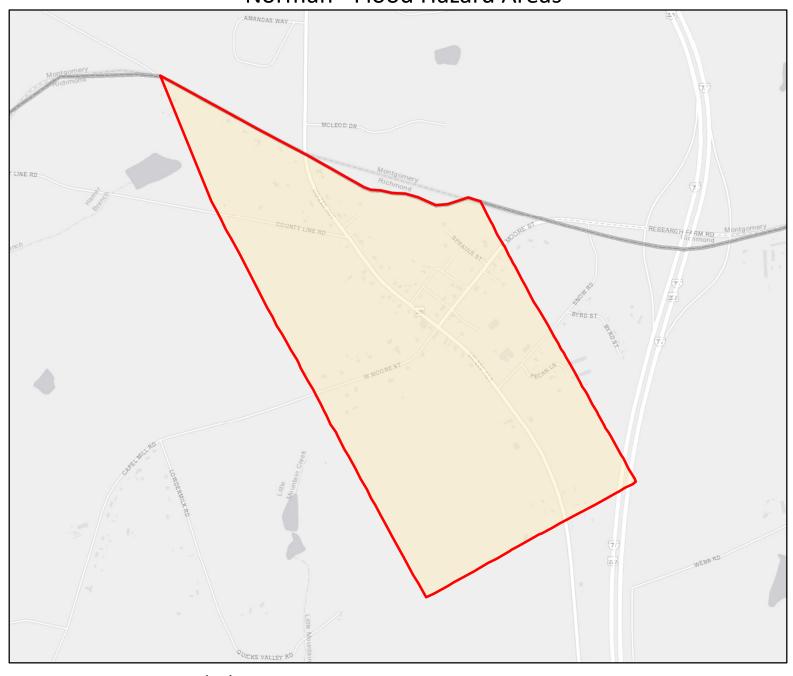


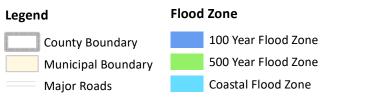


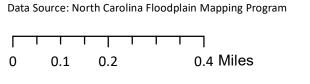


1.1 Miles

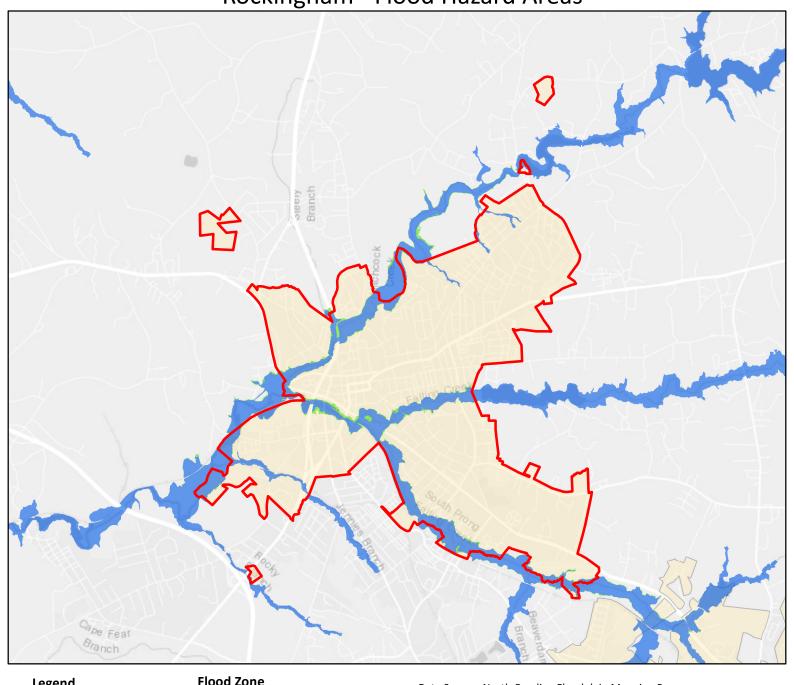
Norman - Flood Hazard Areas





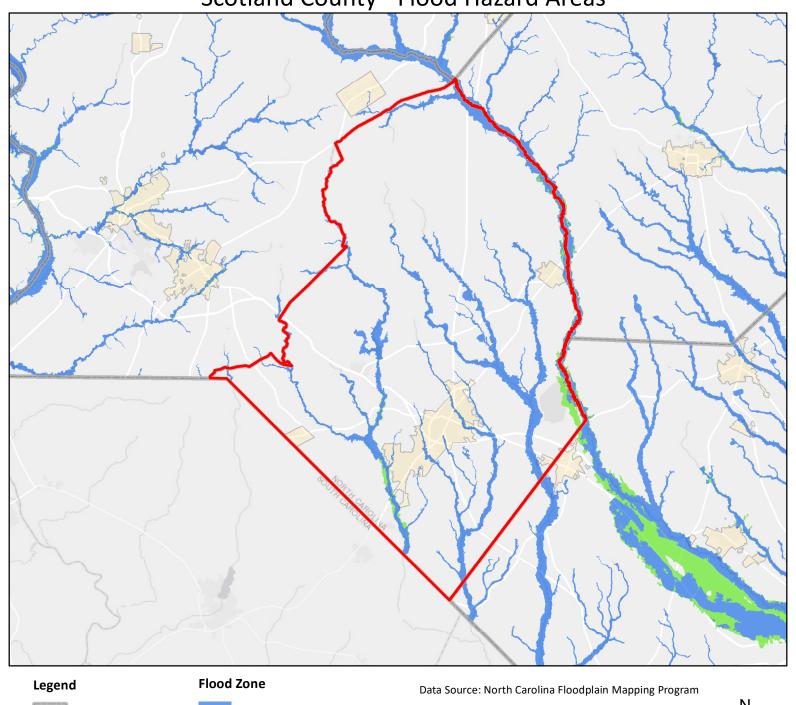


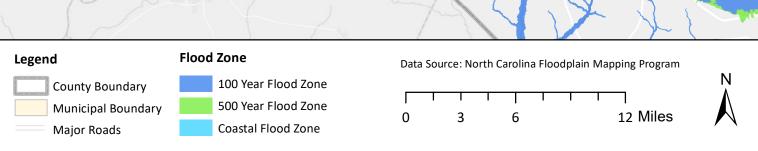
Rockingham - Flood Hazard Areas





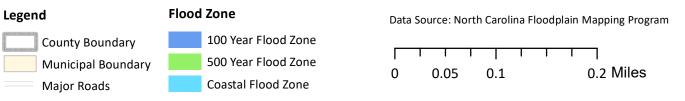
Scotland County - Flood Hazard Areas





East Laurinburg - Flood Hazard Areas





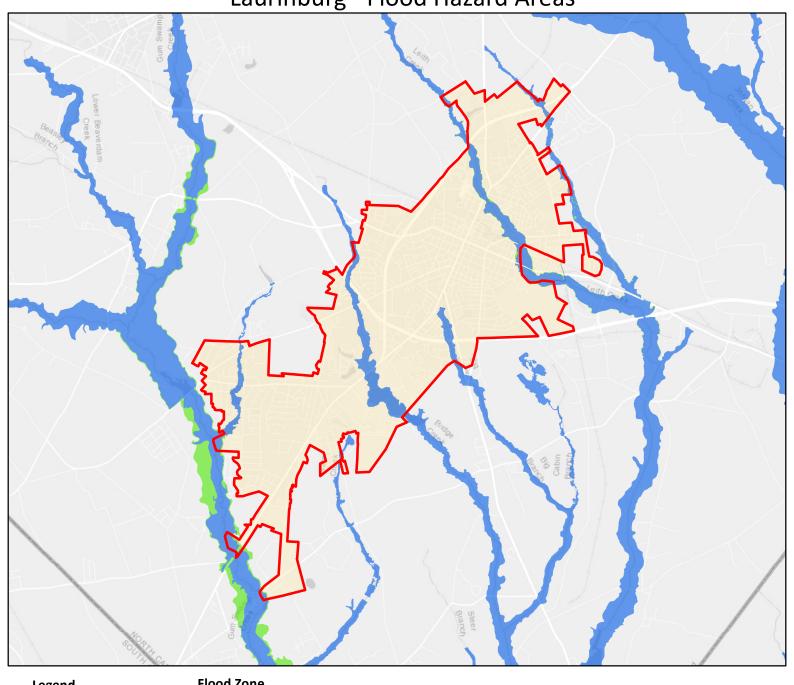
Gibson - Flood Hazard Areas

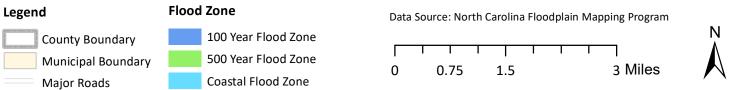




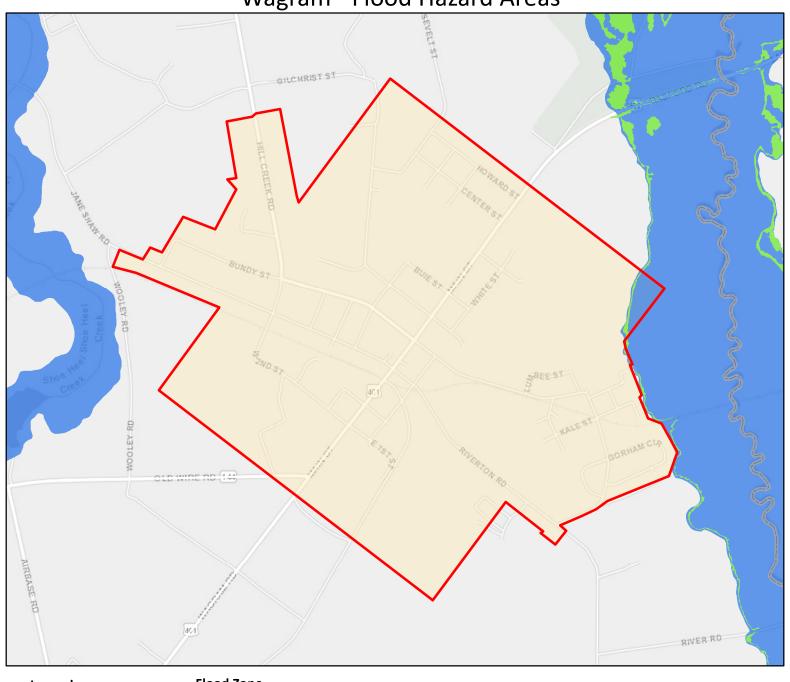


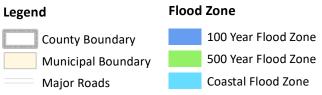
Laurinburg - Flood Hazard Areas

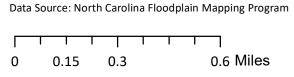




Wagram - Flood Hazard Areas





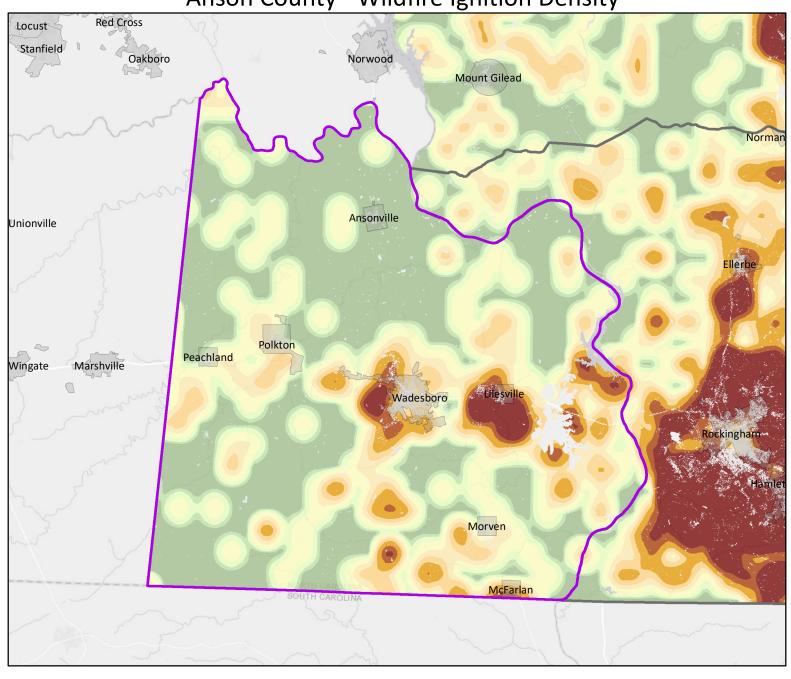




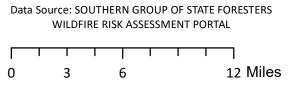
Appendix G Wildfire Hazard Maps

This Appendix includes wildfire hazard maps for each of the participating jurisdictions.

Anson County - Wildfire Ignition Density

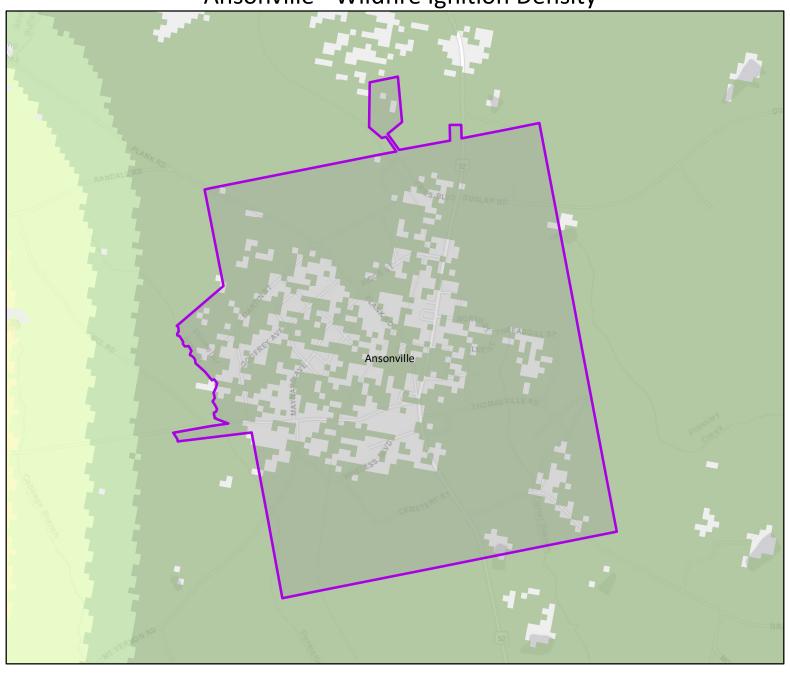




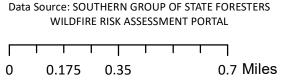




Ansonville - Wildfire Ignition Density

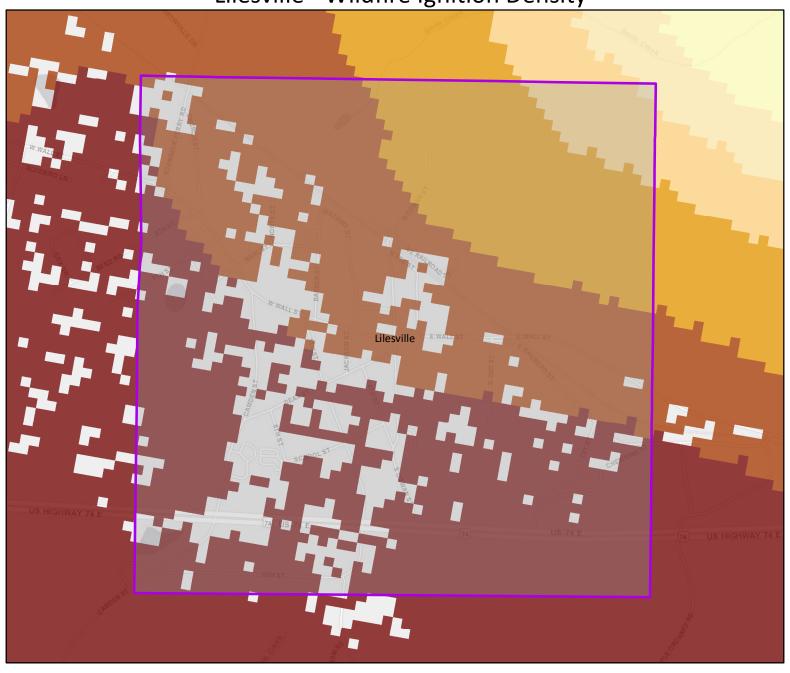




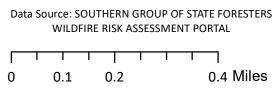




Lilesville - Wildfire Ignition Density

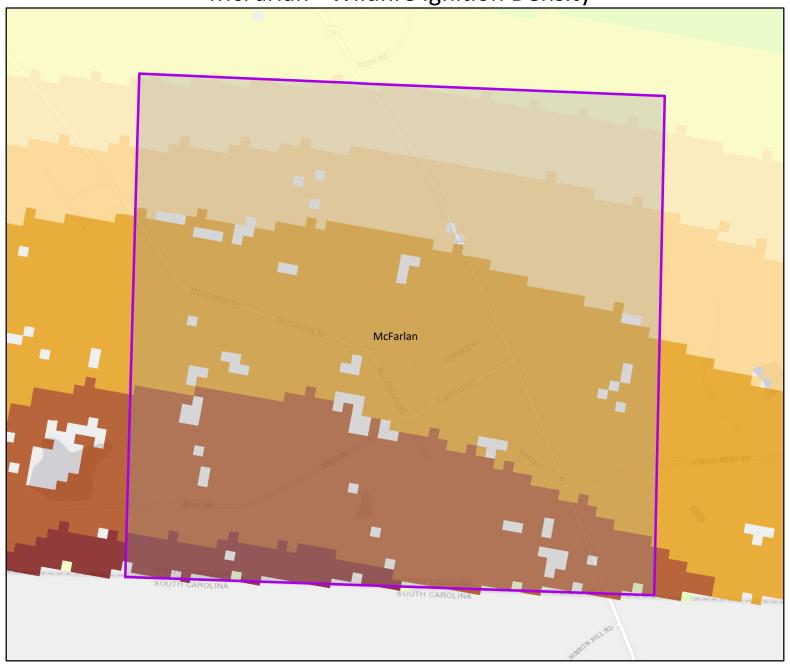


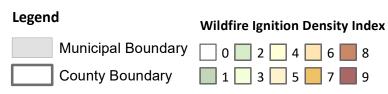


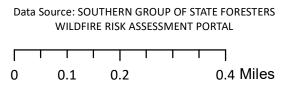




McFarlan - Wildfire Ignition Density

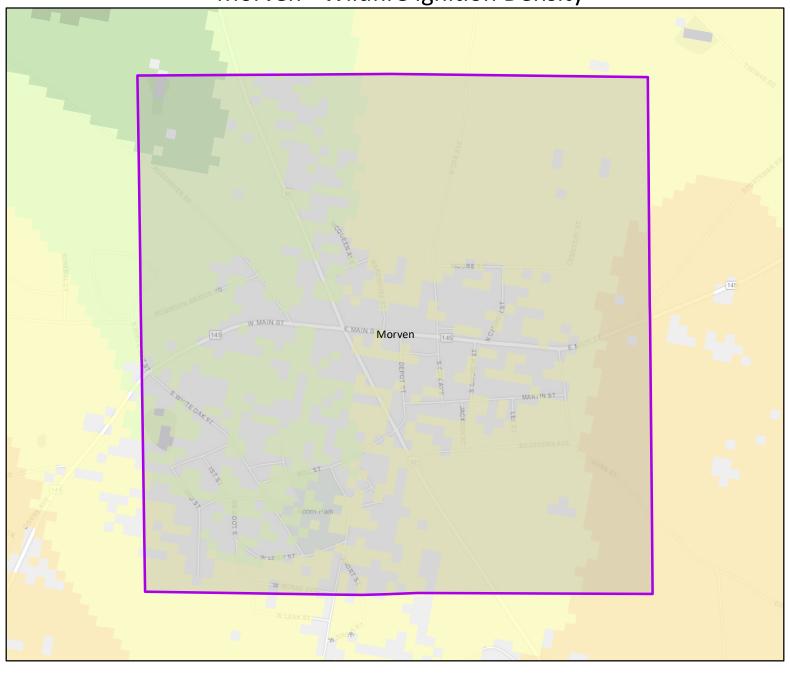




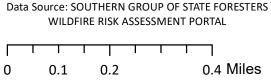




Morven - Wildfire Ignition Density

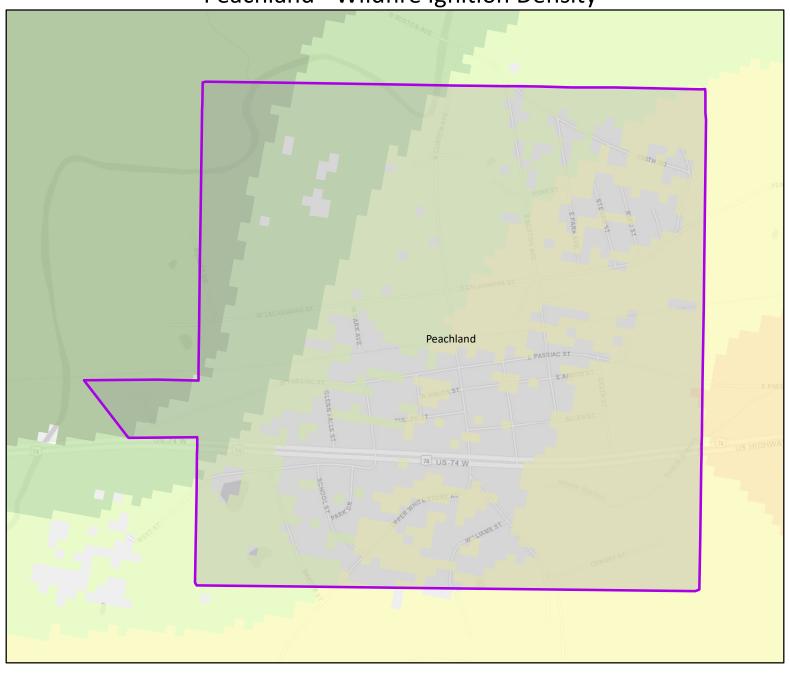




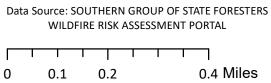




Peachland - Wildfire Ignition Density

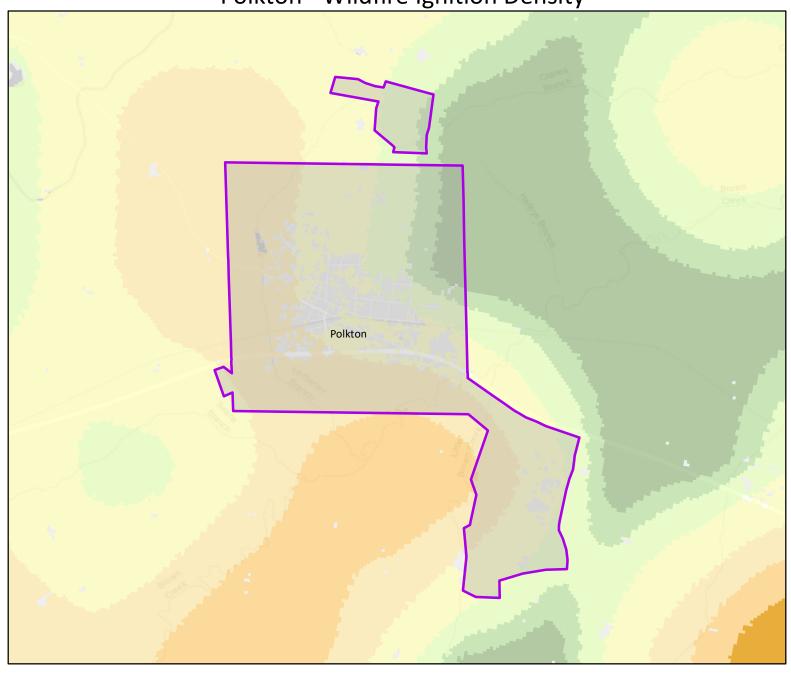


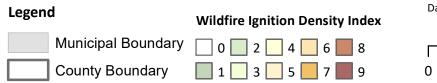


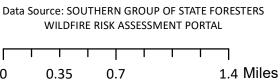




Polkton - Wildfire Ignition Density

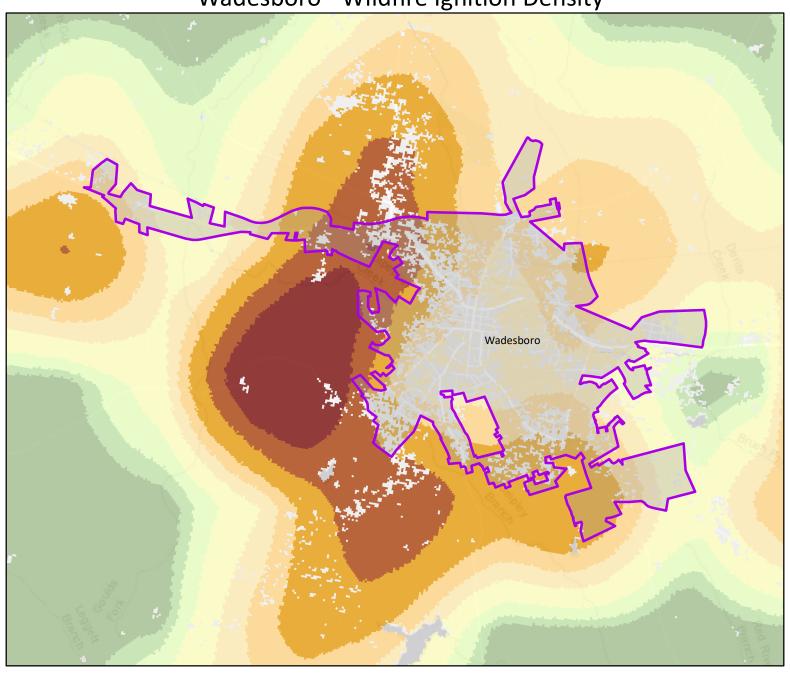




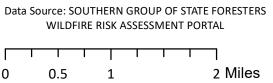




Wadesboro - Wildfire Ignition Density

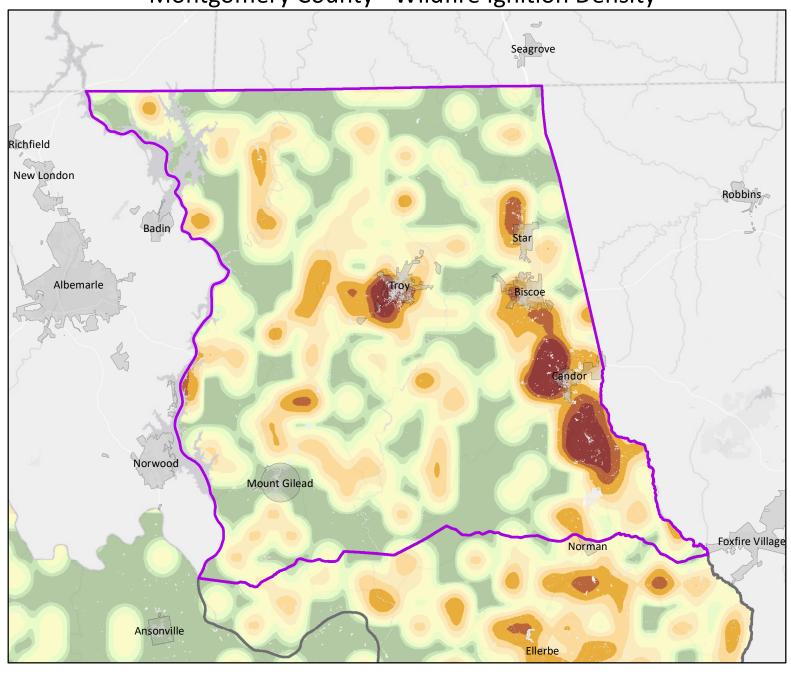


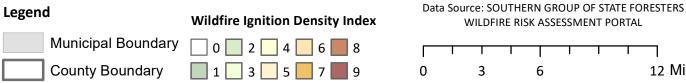






Montgomery County - Wildfire Ignition Density

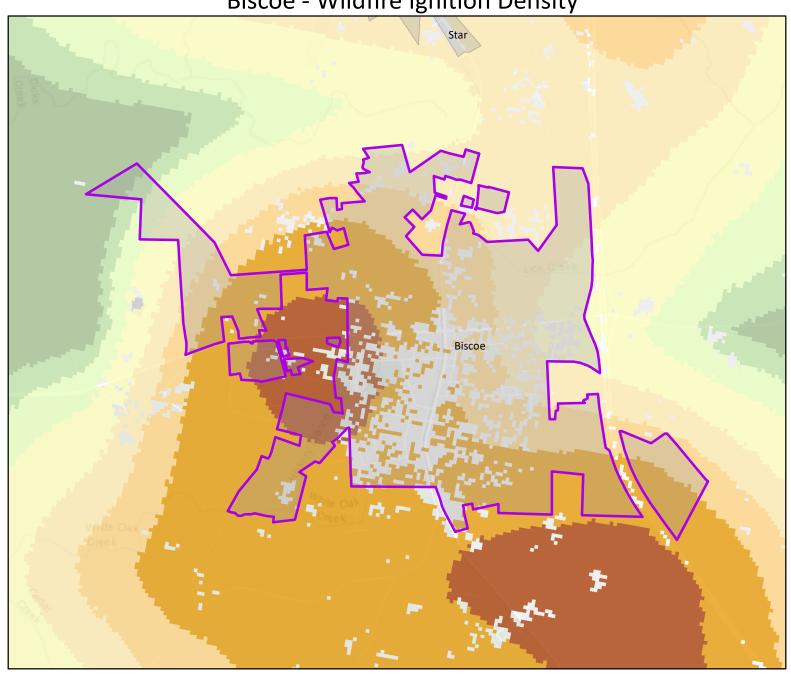




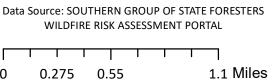


12 Miles

Biscoe - Wildfire Ignition Density

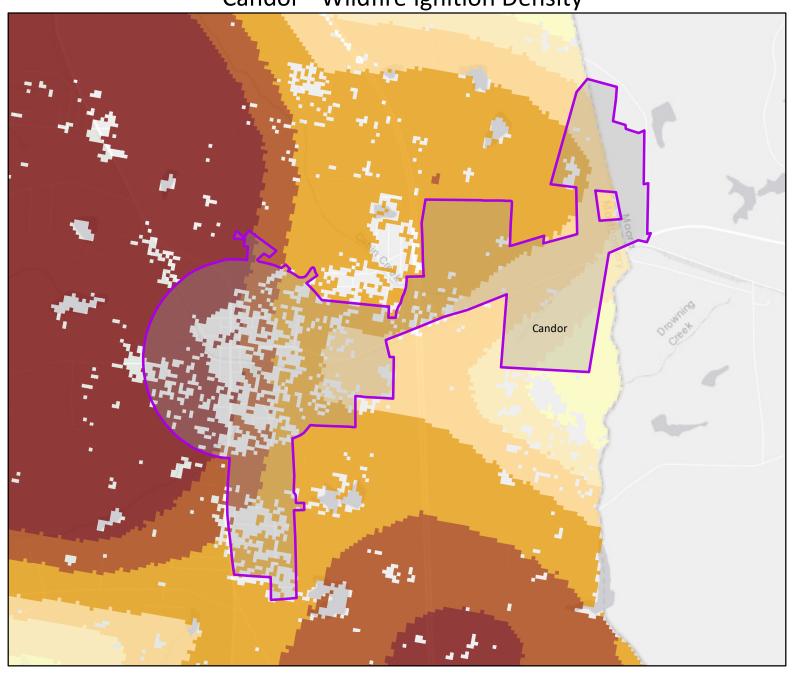




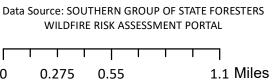




Candor - Wildfire Ignition Density

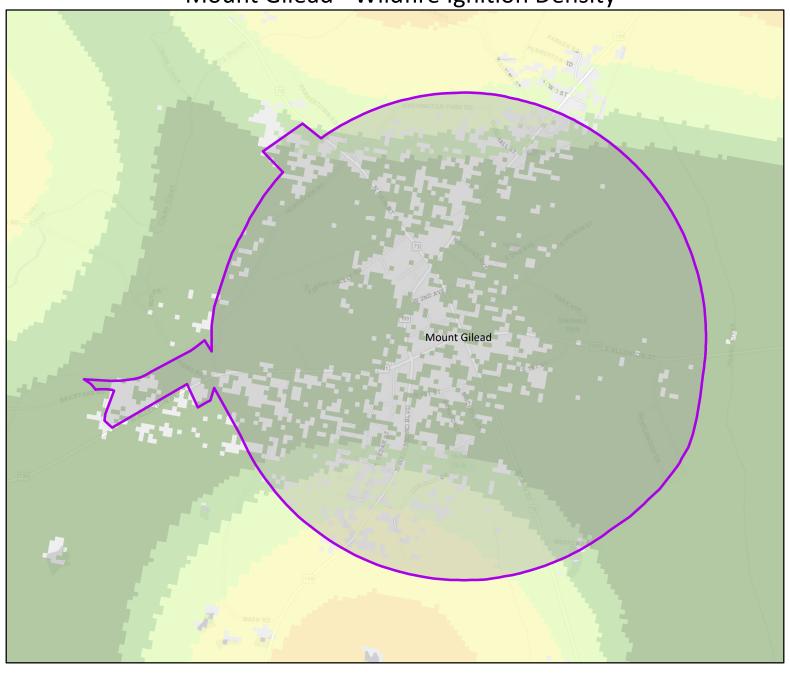




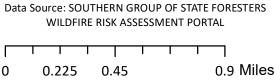




Mount Gilead - Wildfire Ignition Density

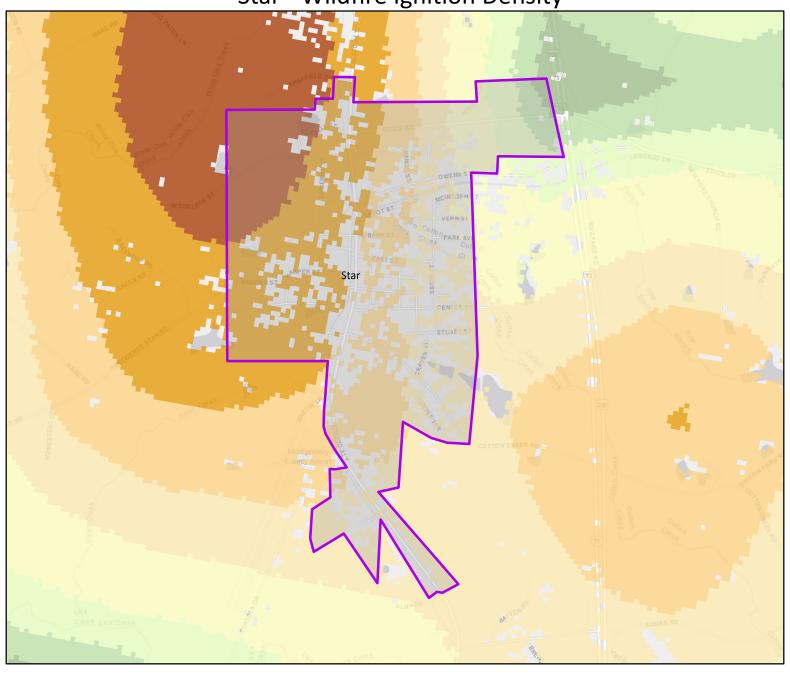


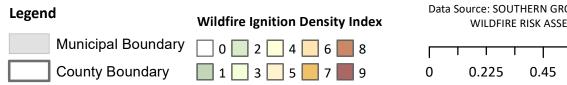


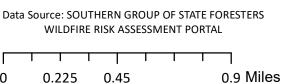




Star - Wildfire Ignition Density

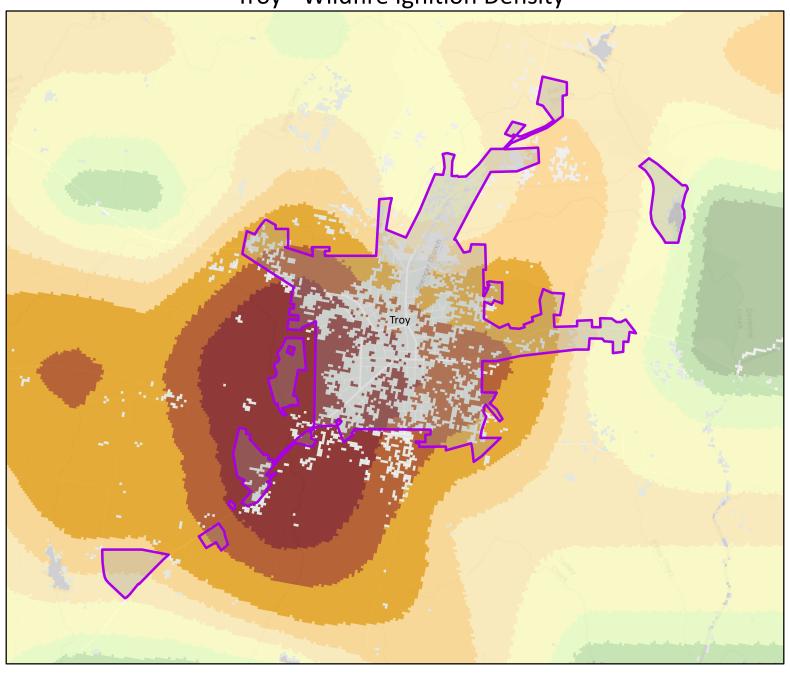


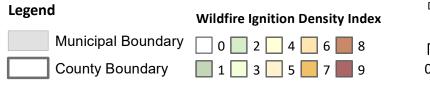


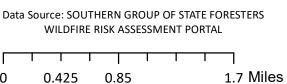




Troy - Wildfire Ignition Density

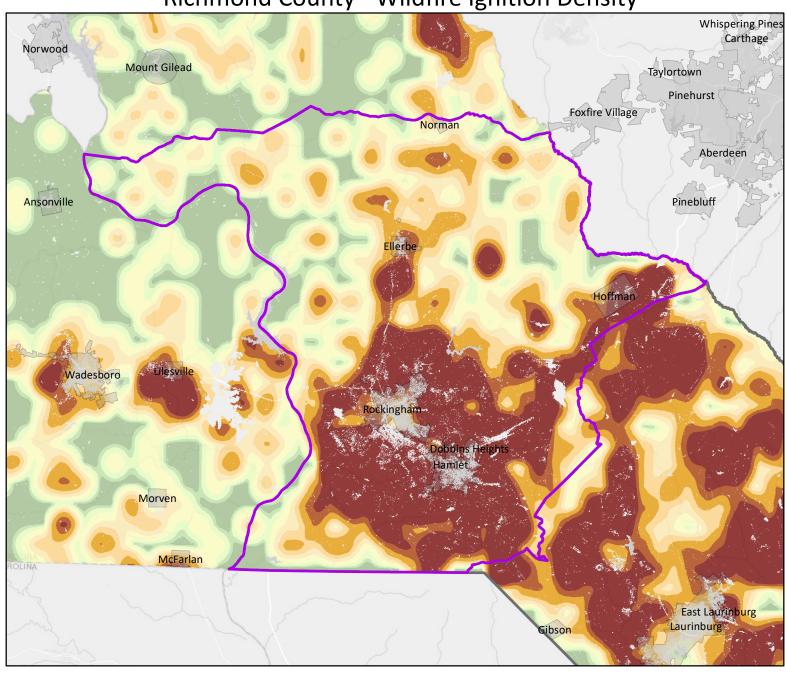




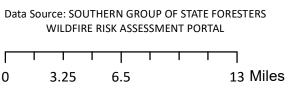




Richmond County - Wildfire Ignition Density

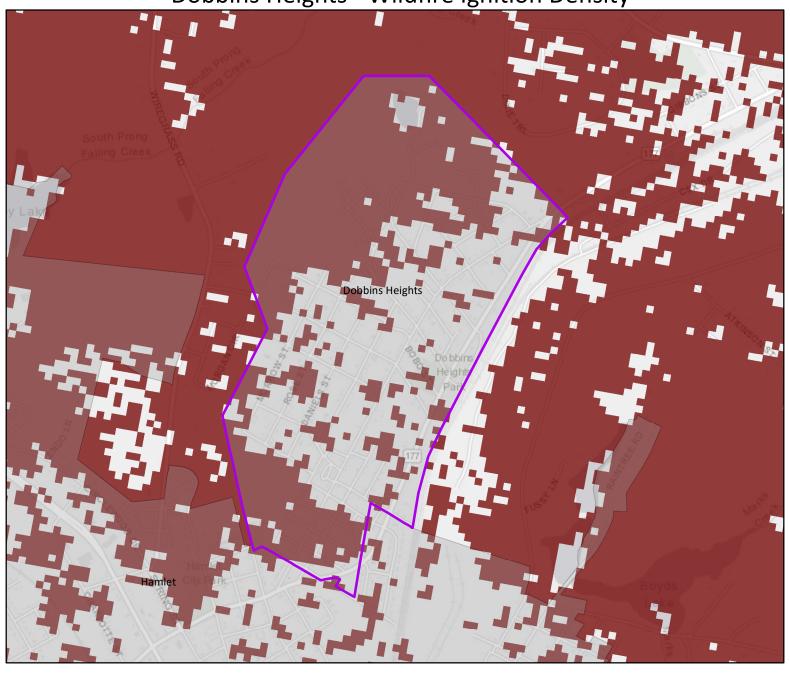








Dobbins Heights - Wildfire Ignition Density

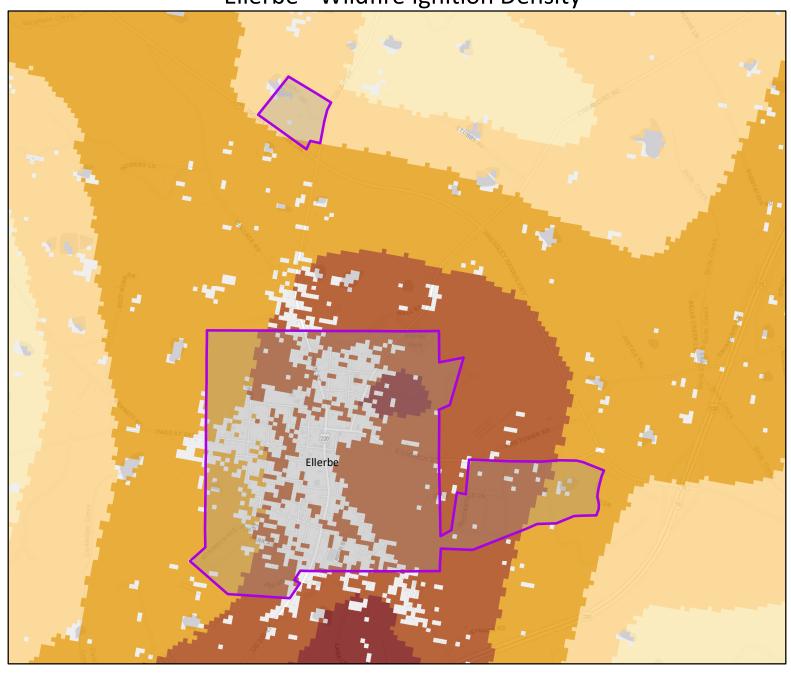




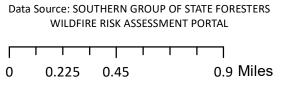




Ellerbe - Wildfire Ignition Density

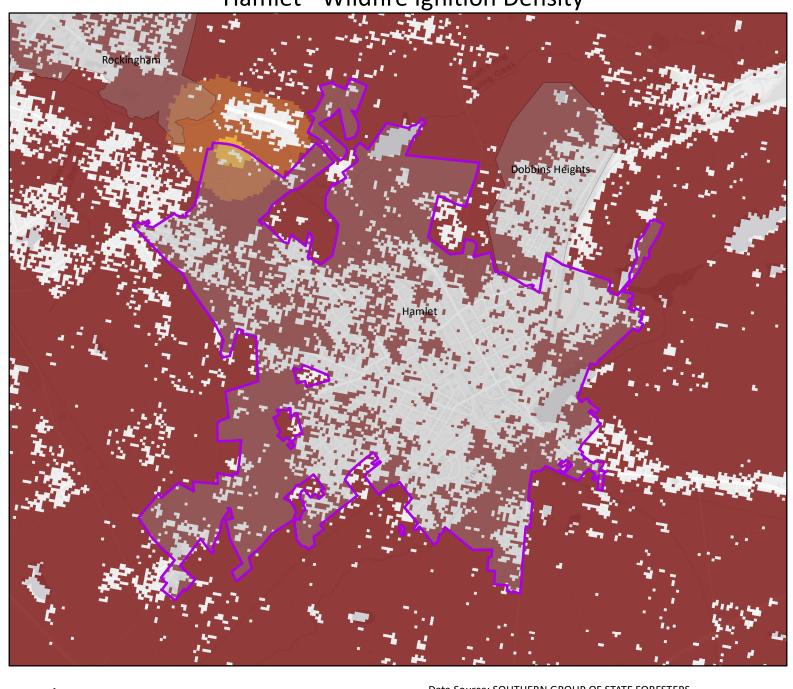


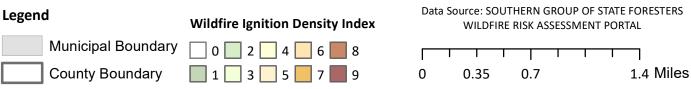






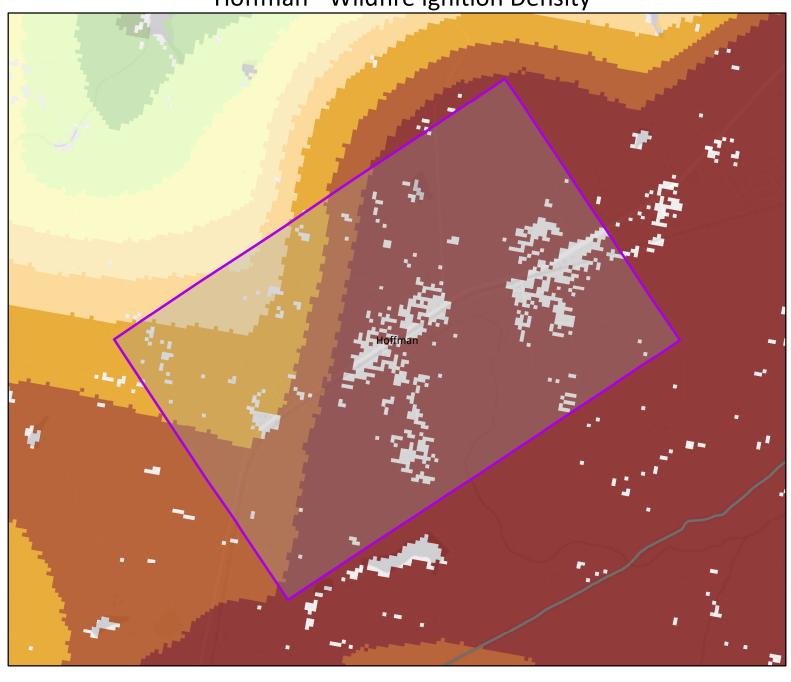
Hamlet - Wildfire Ignition Density



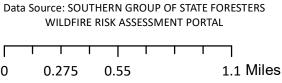




Hoffman - Wildfire Ignition Density

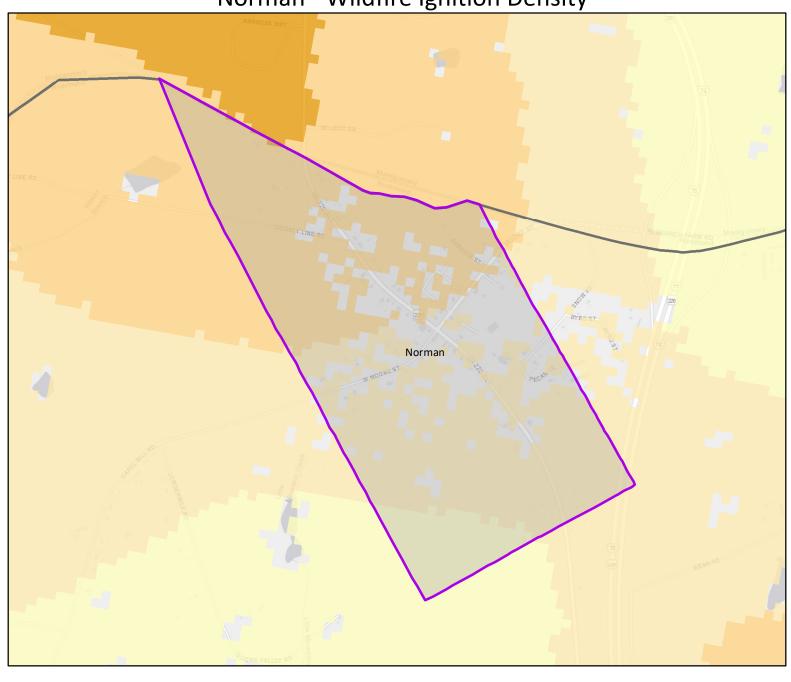




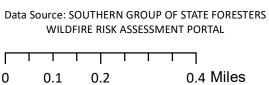




Norman - Wildfire Ignition Density

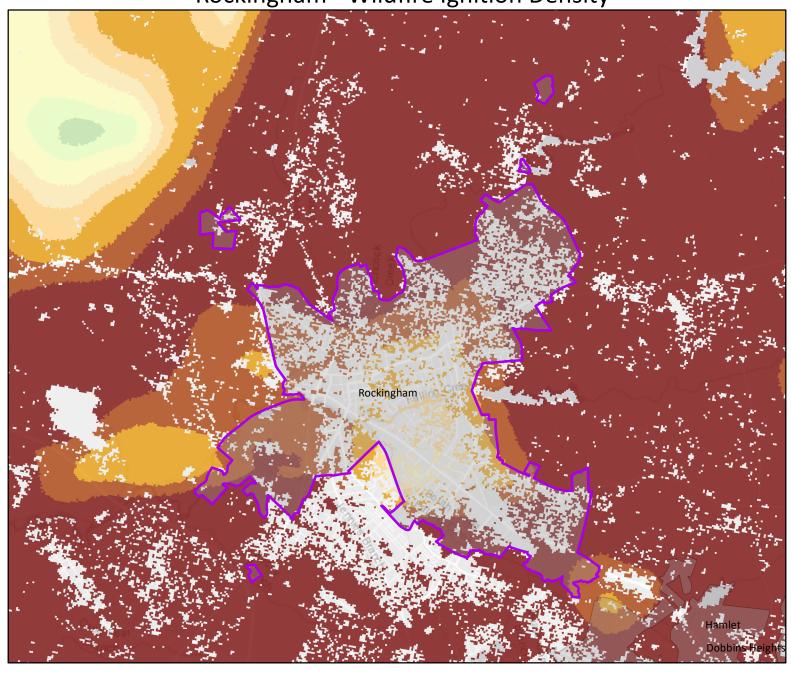




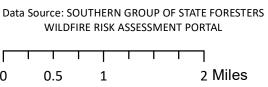




Rockingham - Wildfire Ignition Density

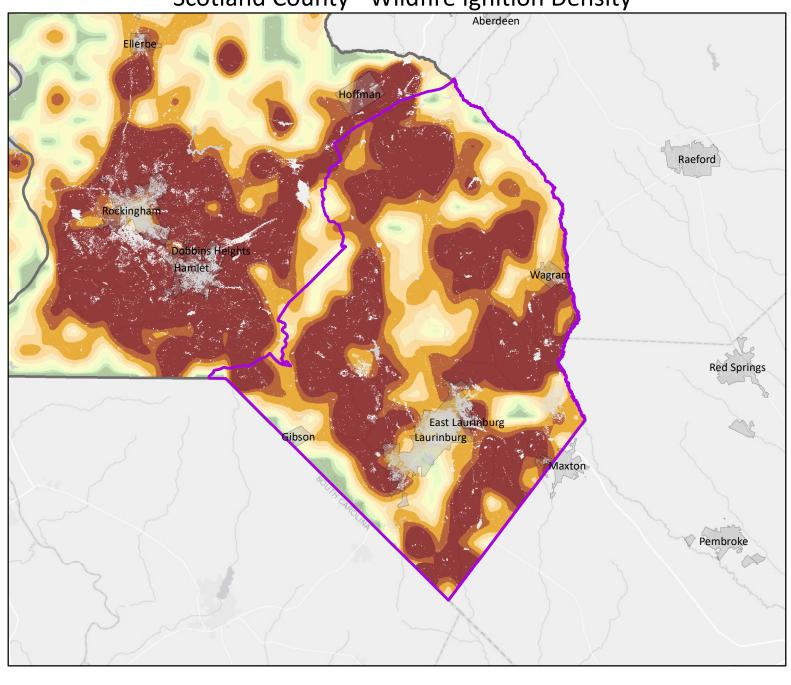


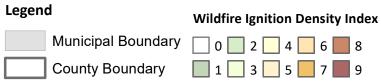


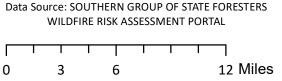




Scotland County - Wildfire Ignition Density









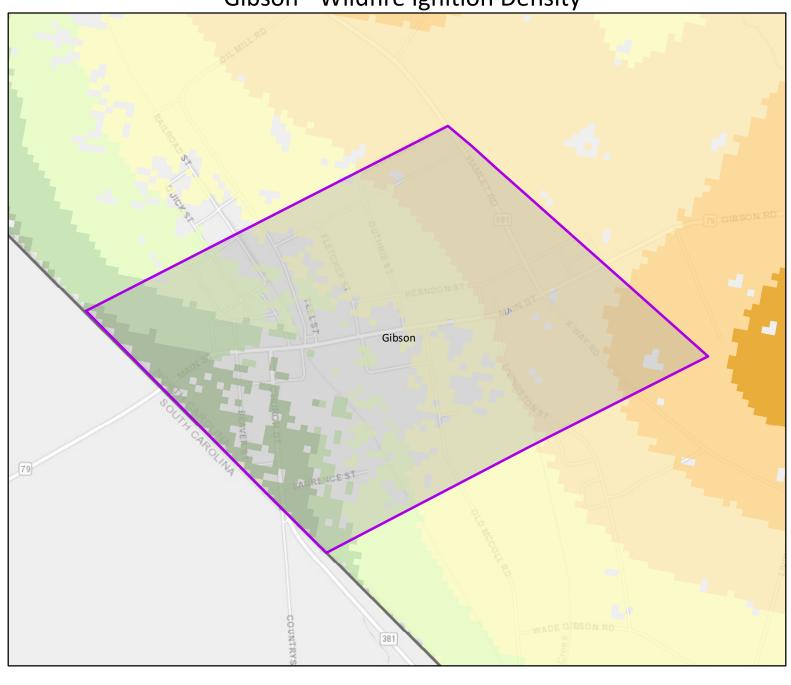
East Laurinburg - Wildfire Ignition Density

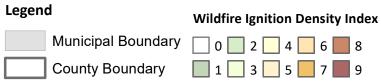


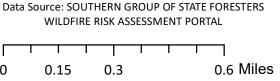




Gibson - Wildfire Ignition Density

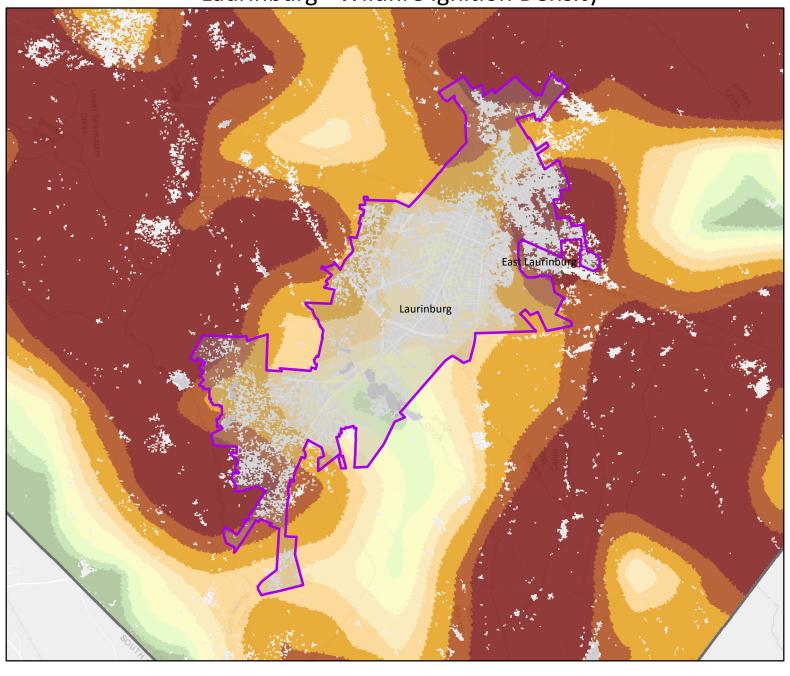




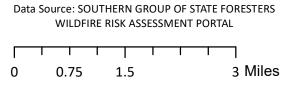




Laurinburg - Wildfire Ignition Density

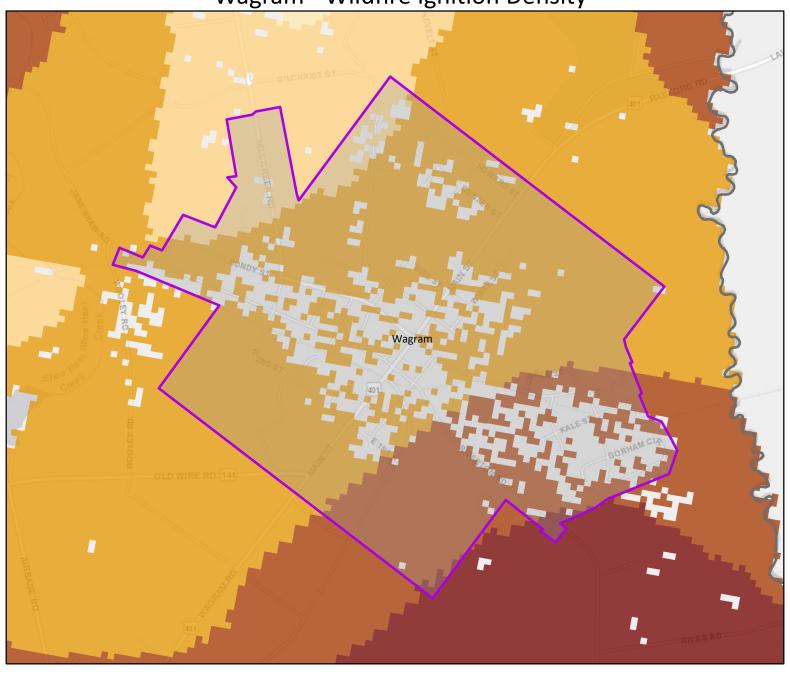


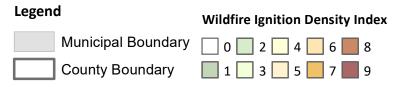


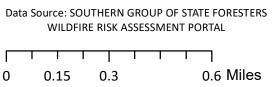




Wagram - Wildfire Ignition Density

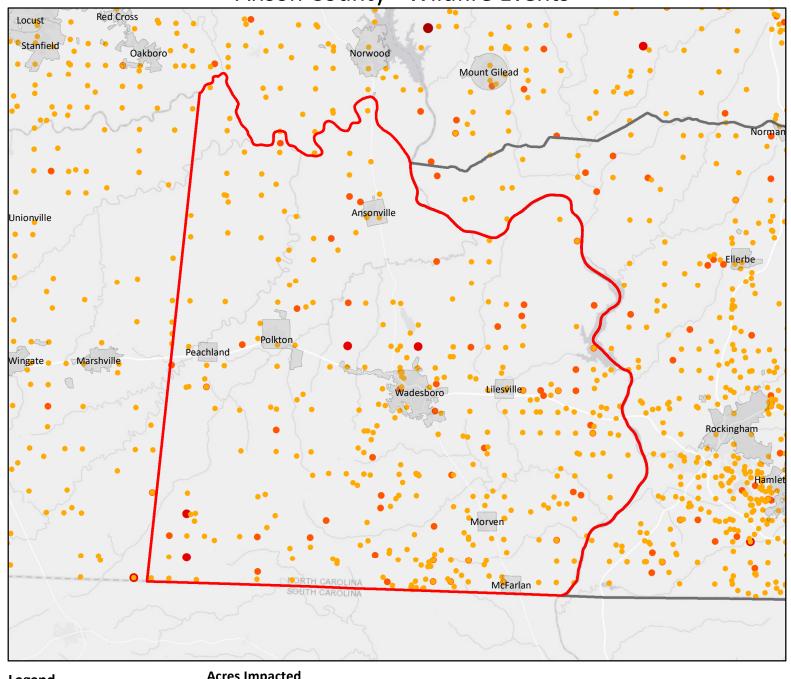


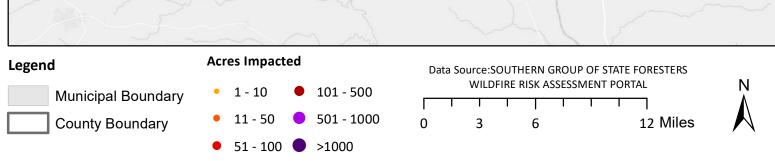




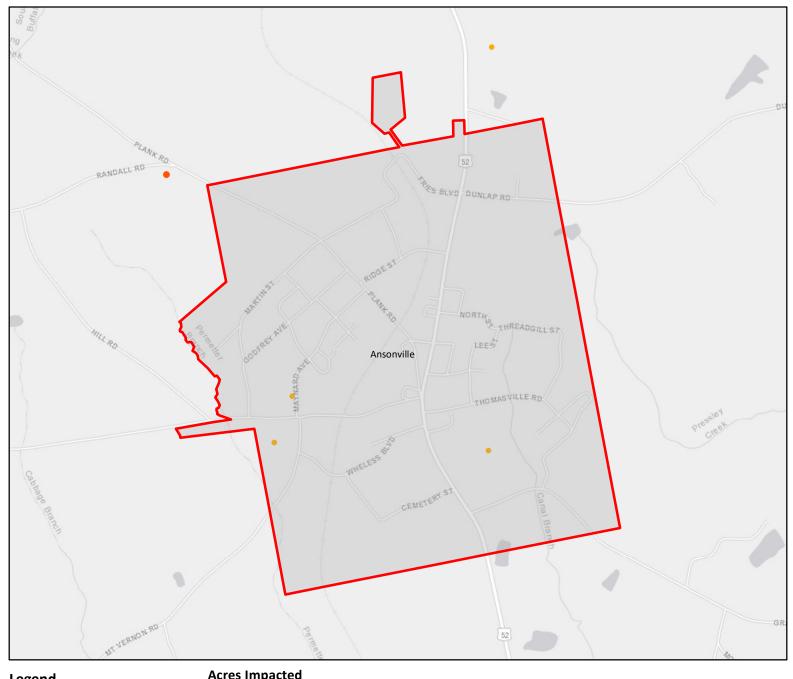


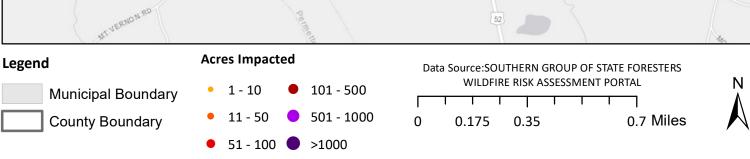
Anson County - Wildfire Events





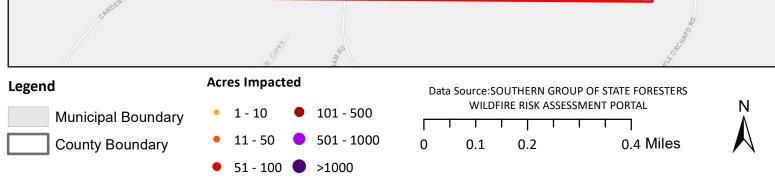
Ansonville - Wildfire Events





Lilesville - Wildfire Events





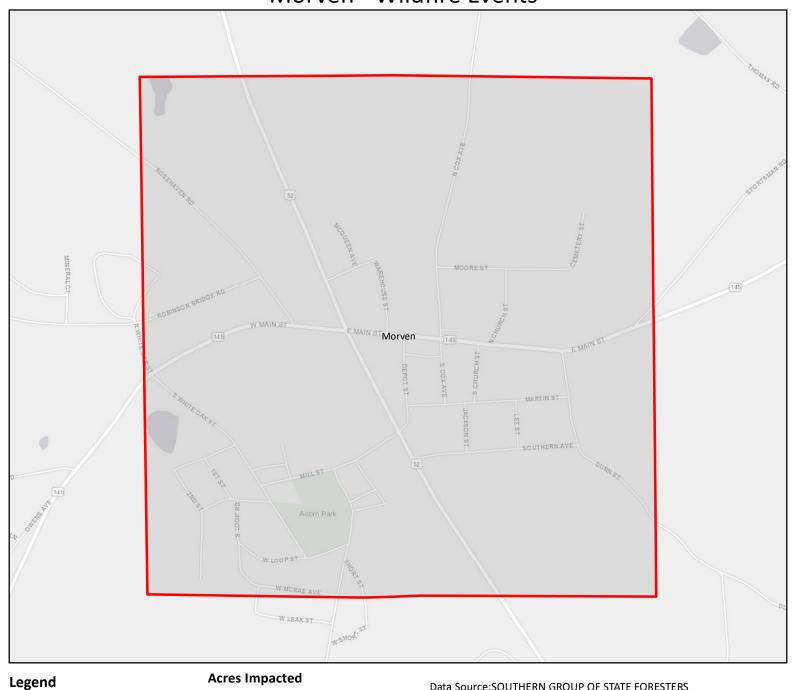
McFarlan - Wildfire Events

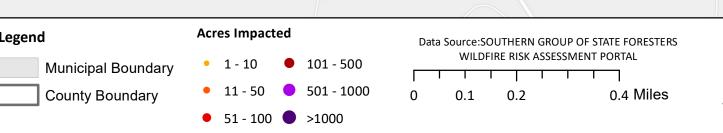




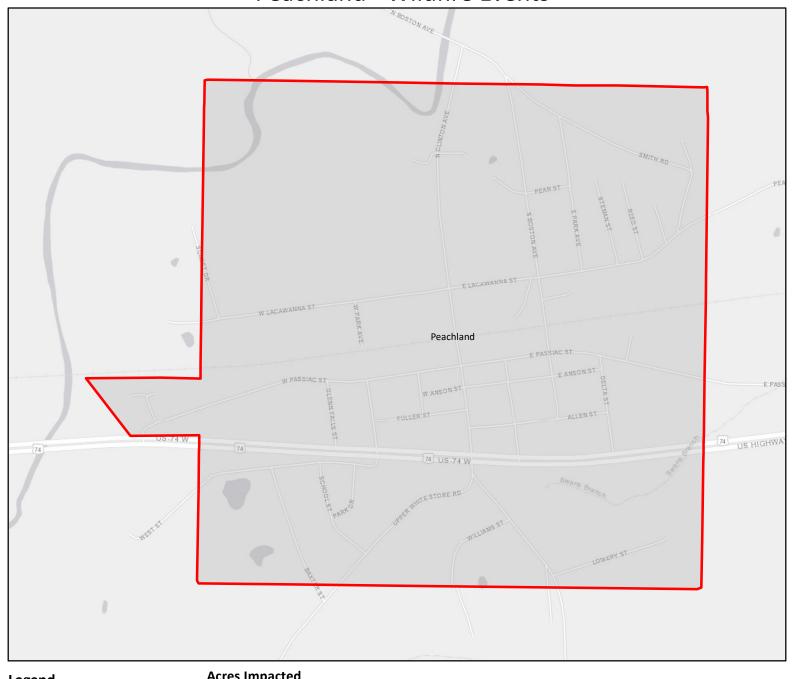


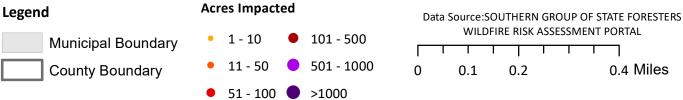
Morven - Wildfire Events



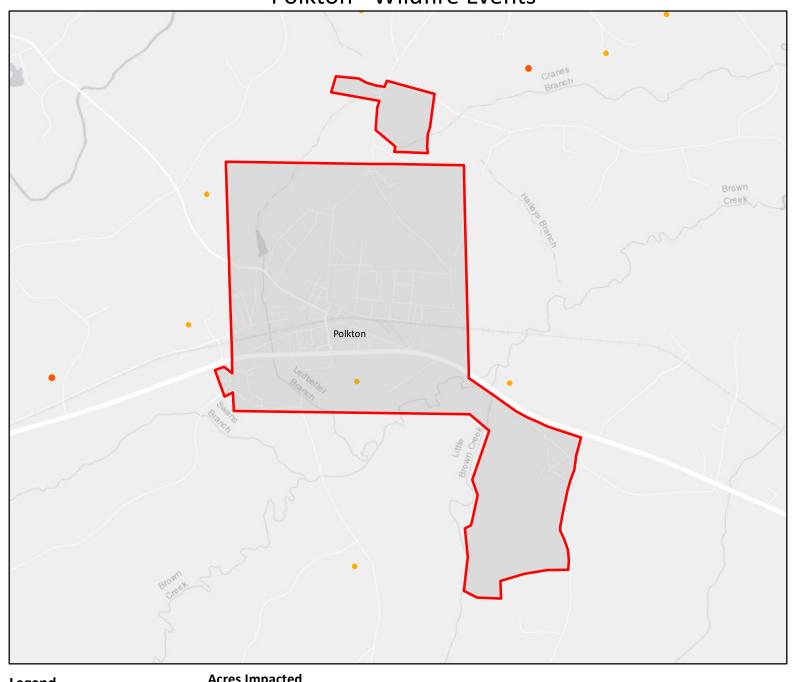


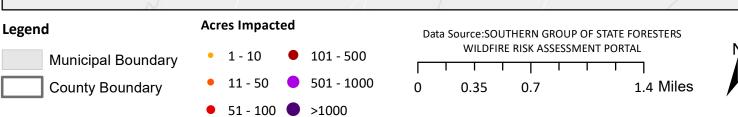
Peachland - Wildfire Events



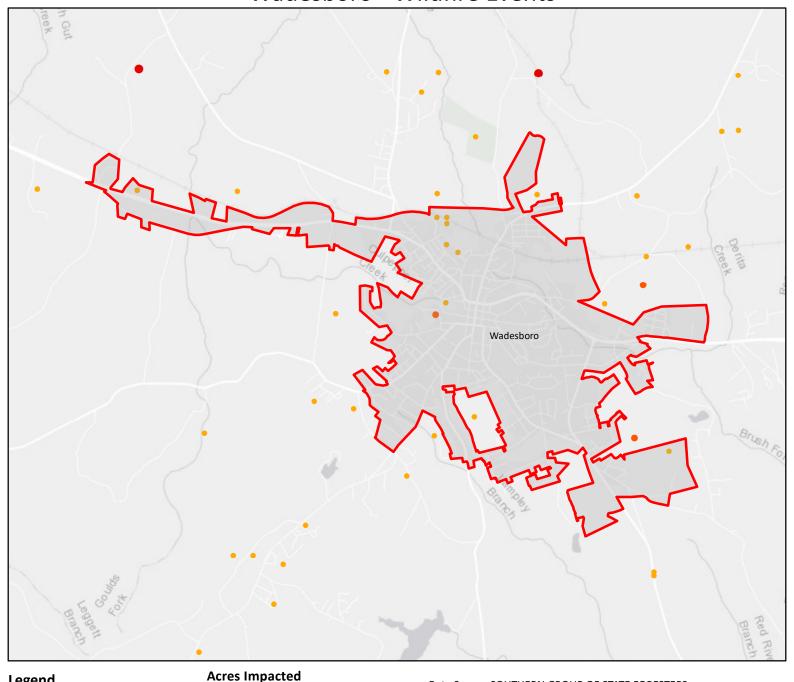


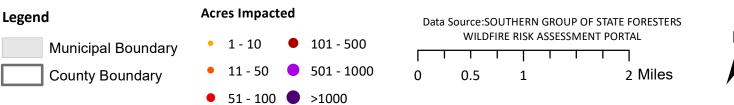
Polkton - Wildfire Events



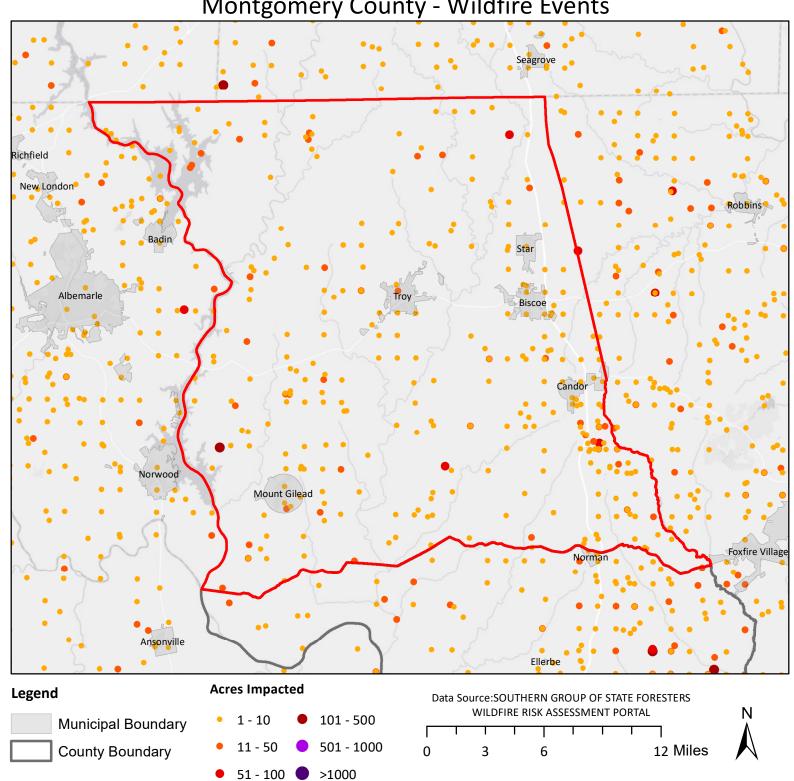


Wadesboro - Wildfire Events

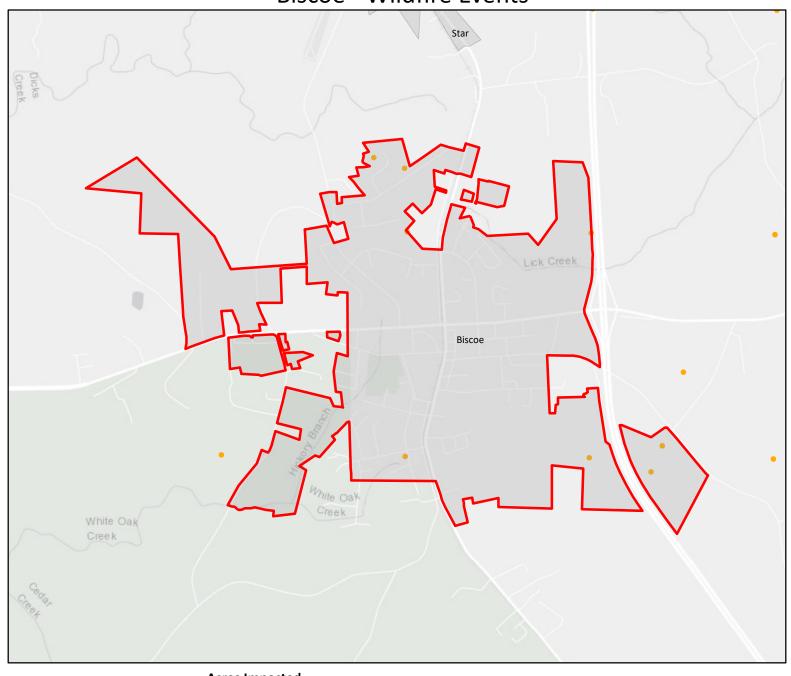


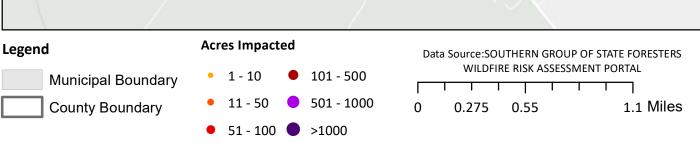


Montgomery County - Wildfire Events

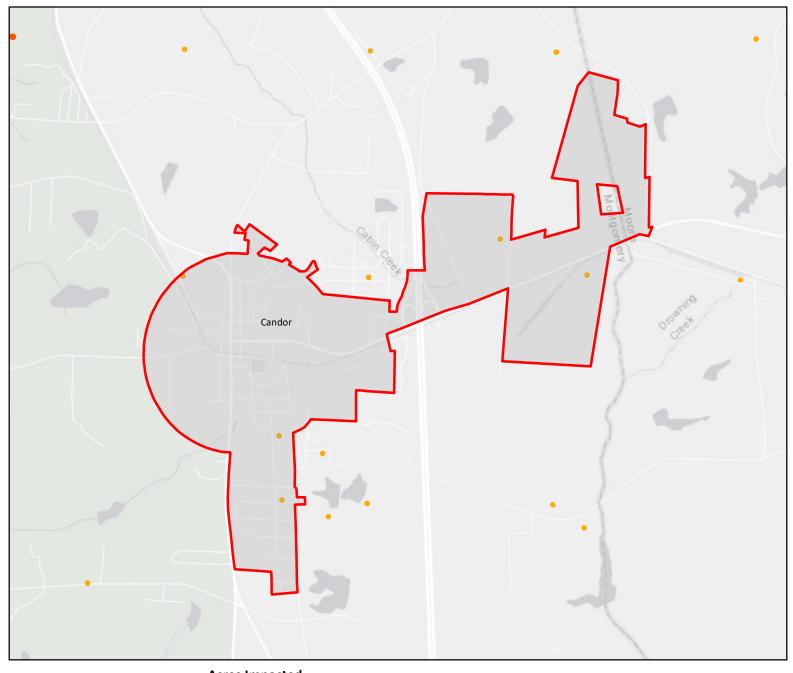


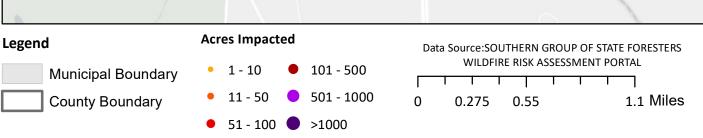
Biscoe - Wildfire Events



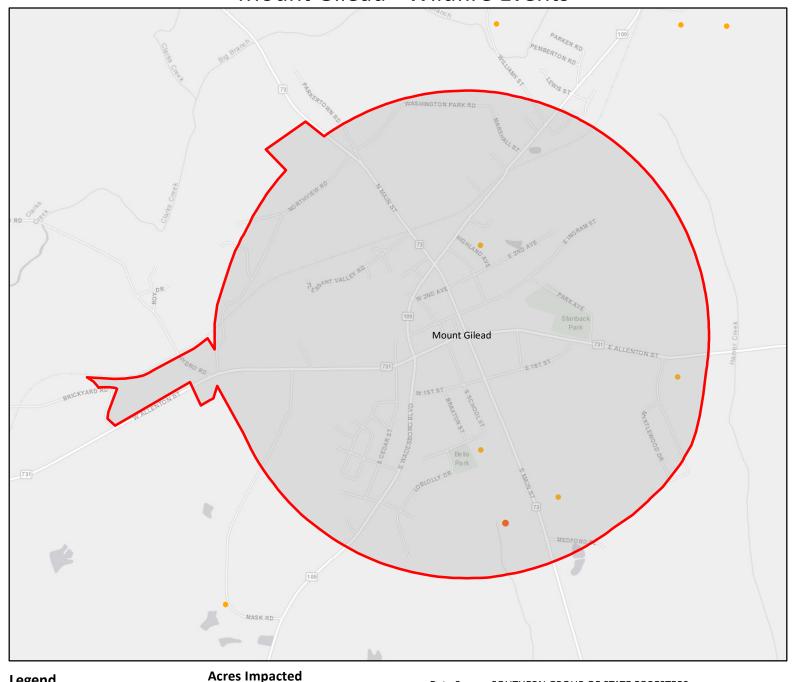


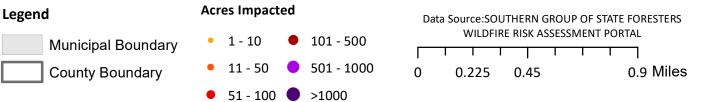
Candor - Wildfire Events



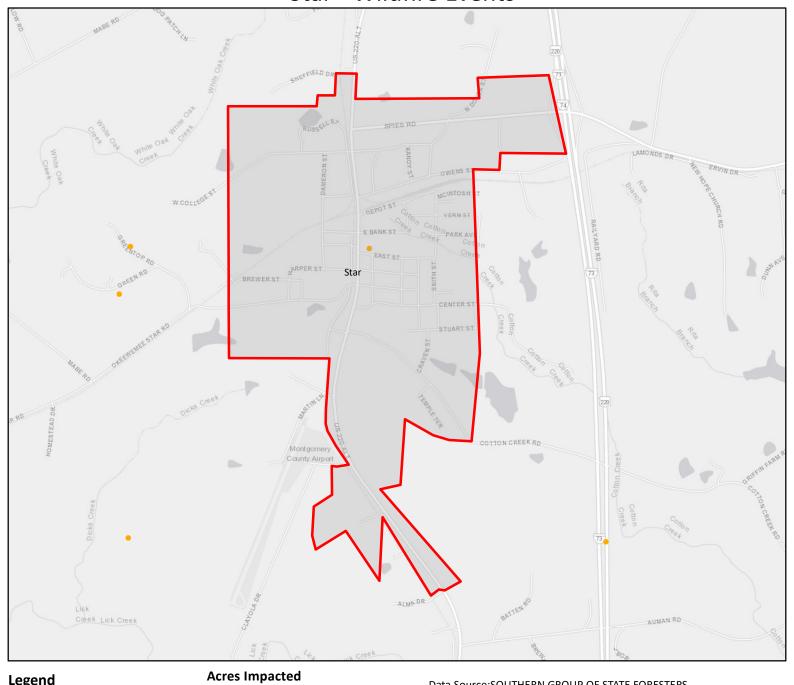


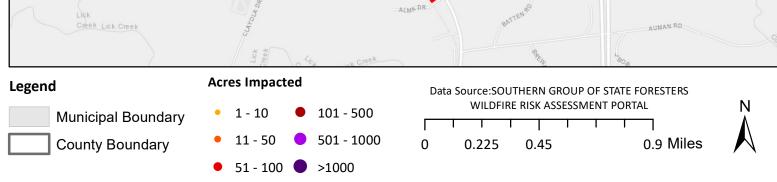
Mount Gilead - Wildfire Events



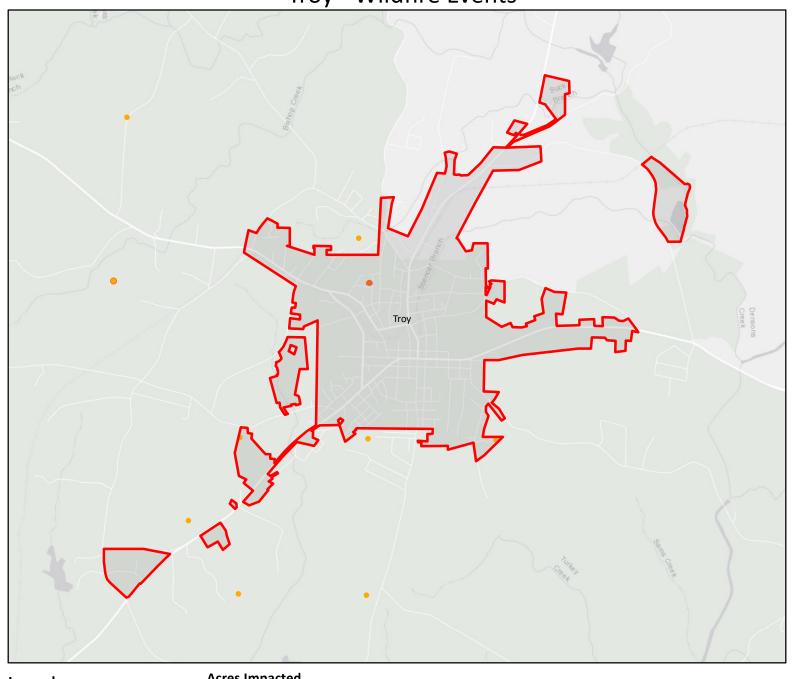


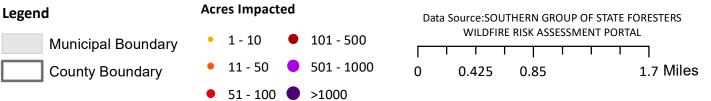
Star - Wildfire Events



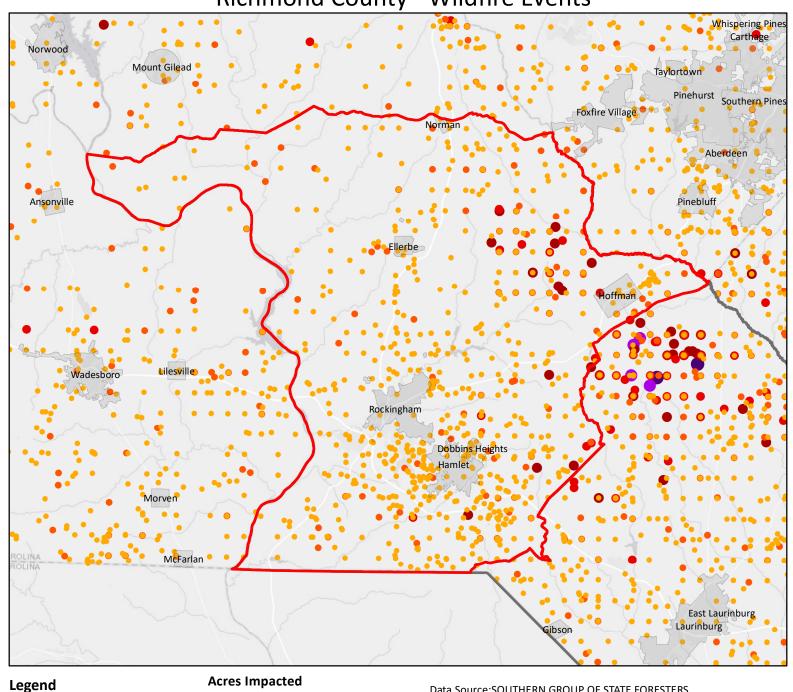


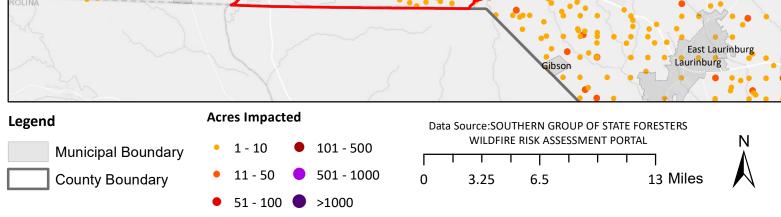
Troy - Wildfire Events



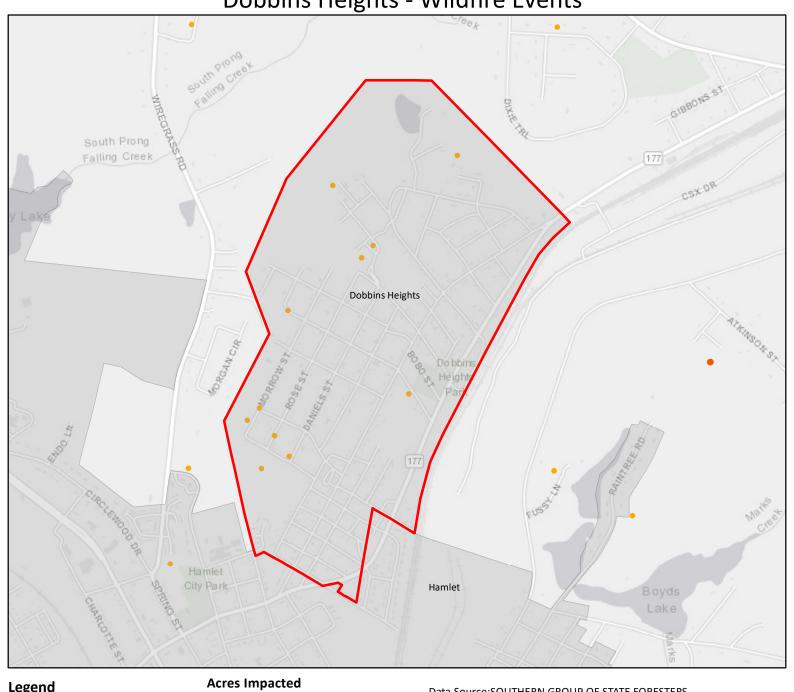


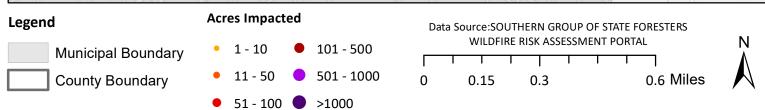
Richmond County - Wildfire Events



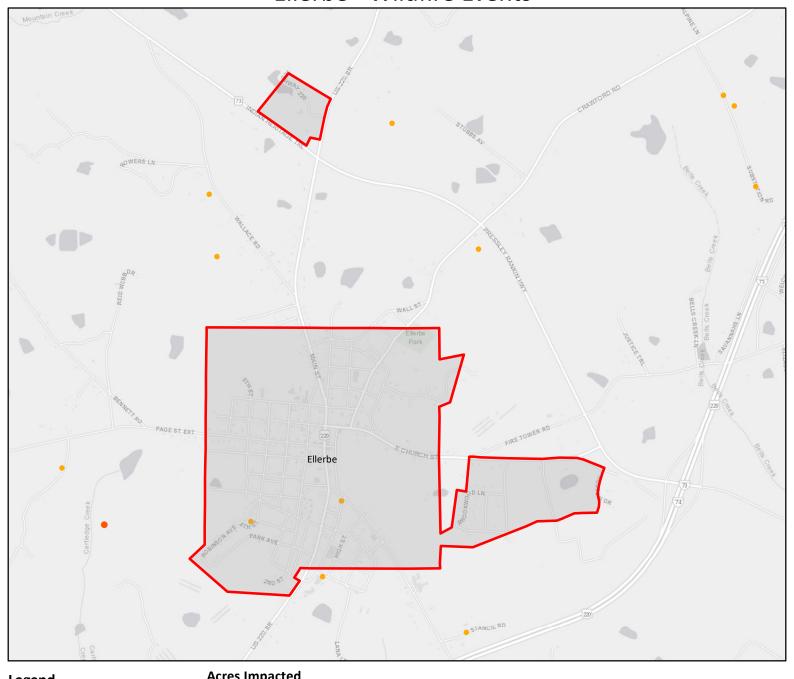


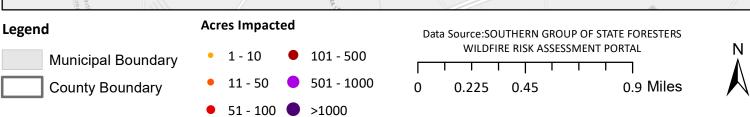
Dobbins Heights - Wildfire Events



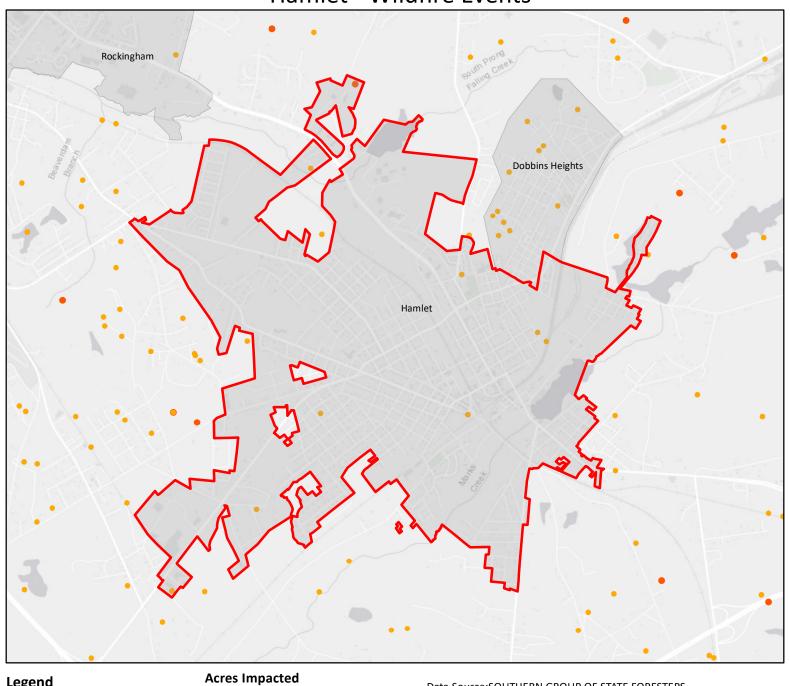


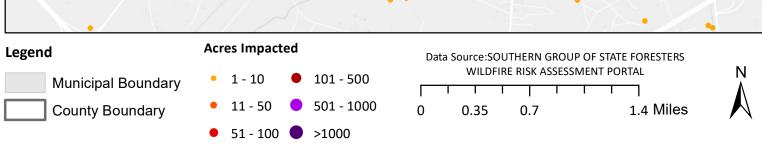
Ellerbe - Wildfire Events



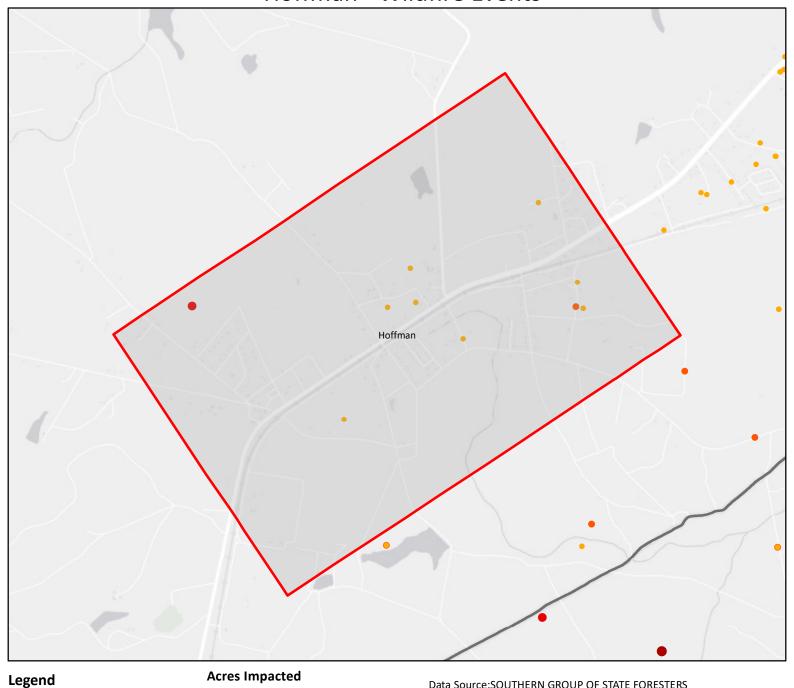


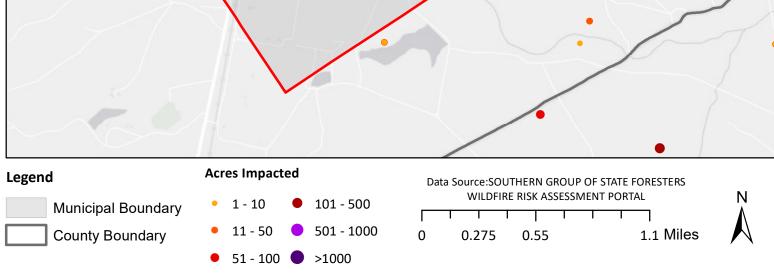
Hamlet - Wildfire Events



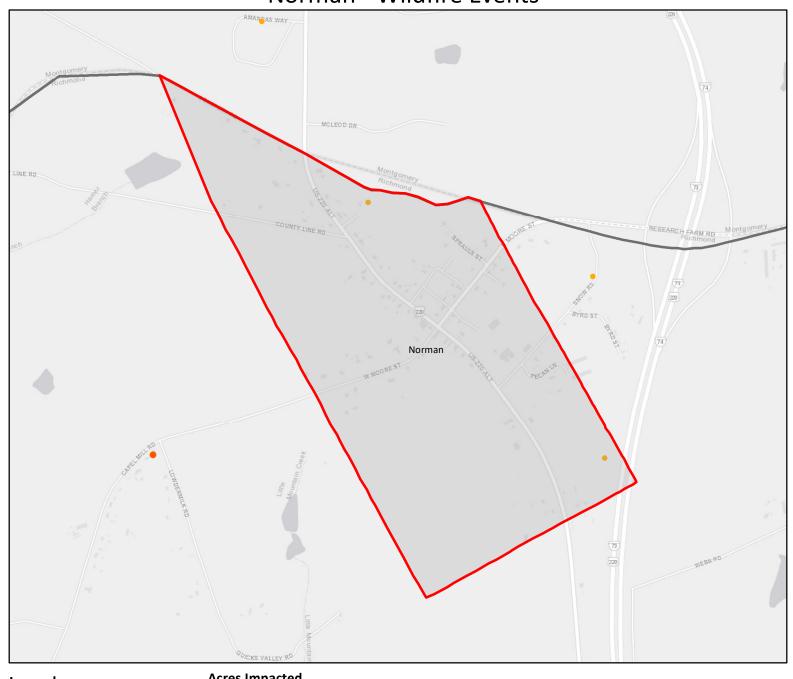


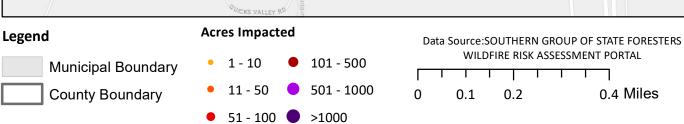
Hoffman - Wildfire Events





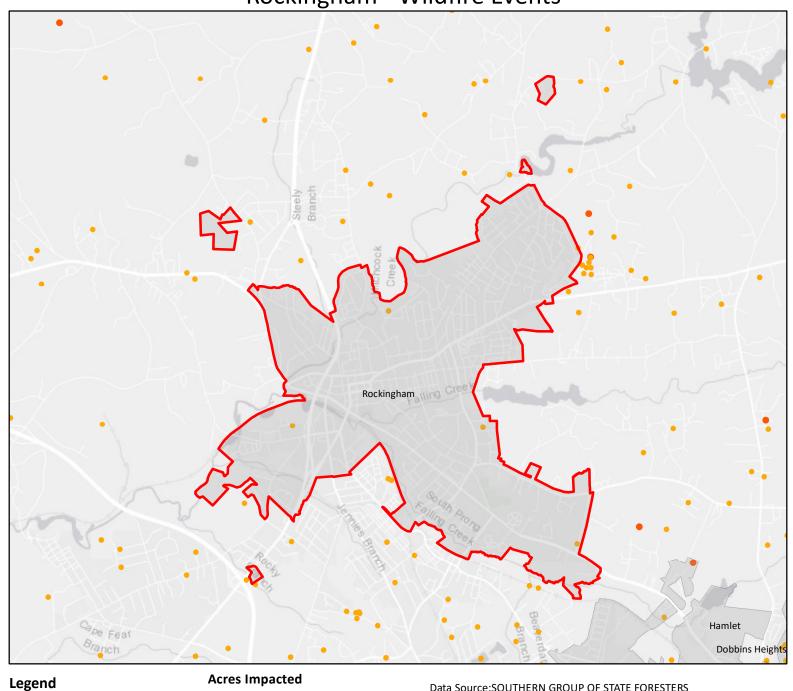
Norman - Wildfire Events

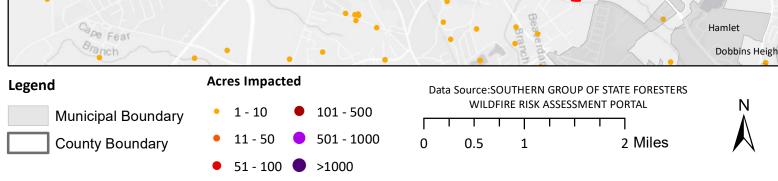




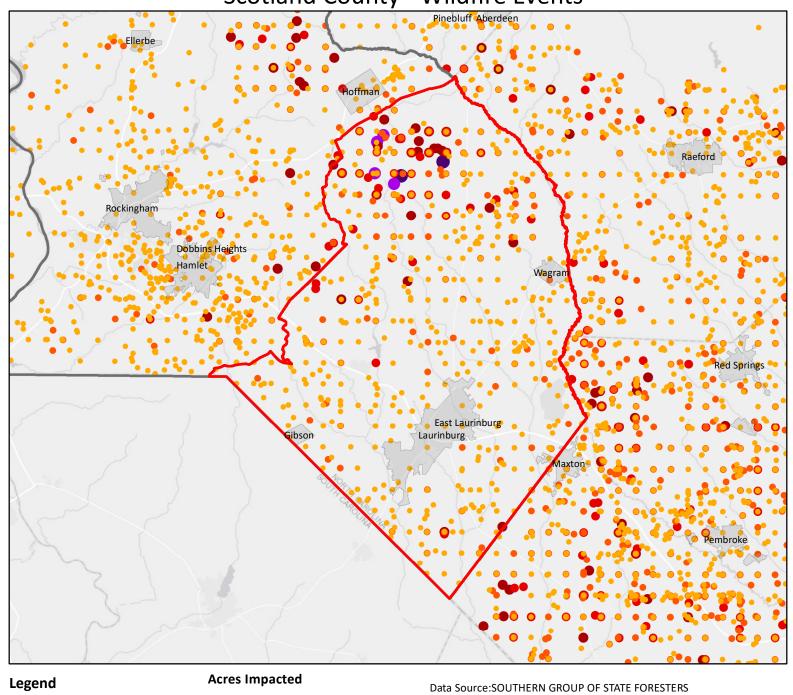


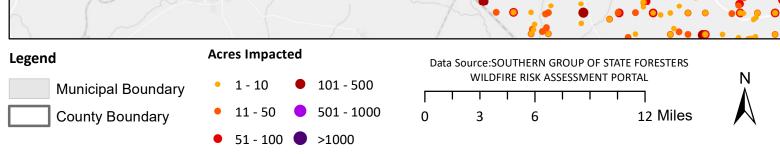
Rockingham - Wildfire Events





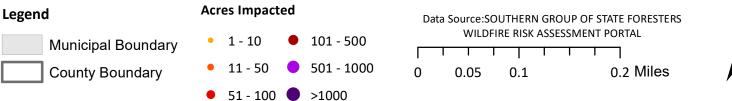
Scotland County - Wildfire Events



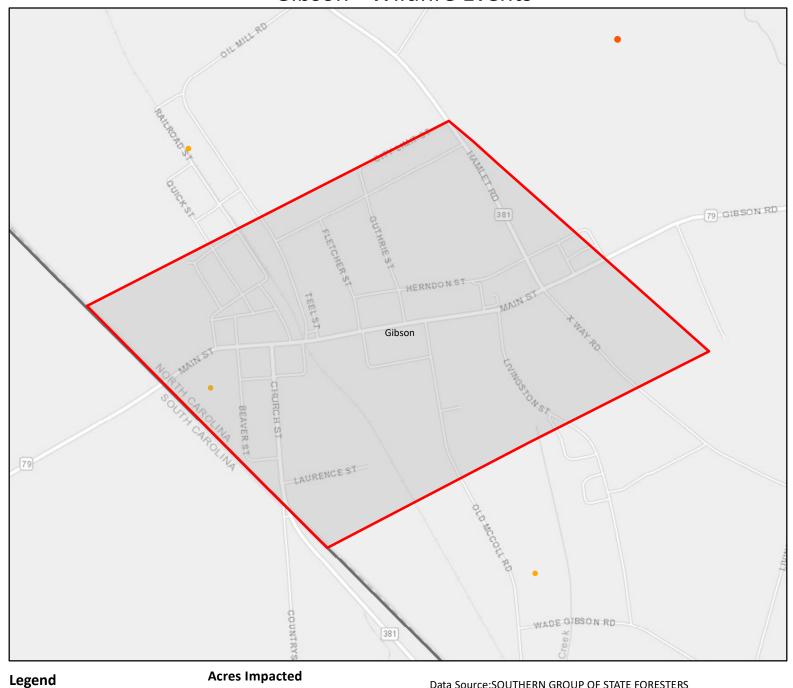


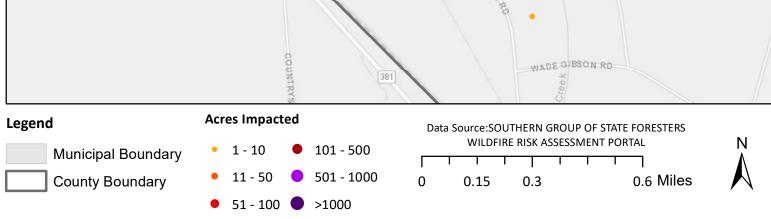
East Laurinburg - Wildfire Events



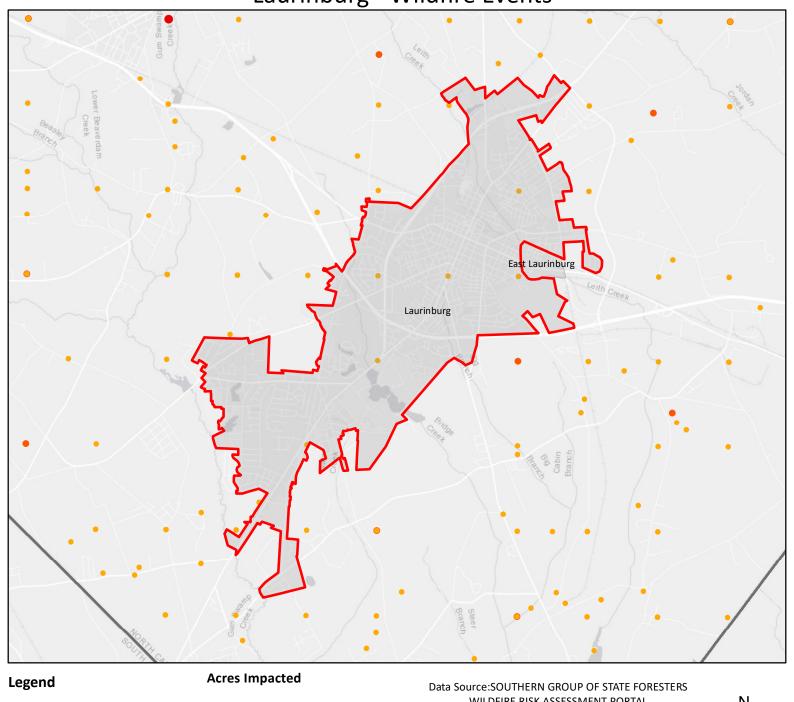


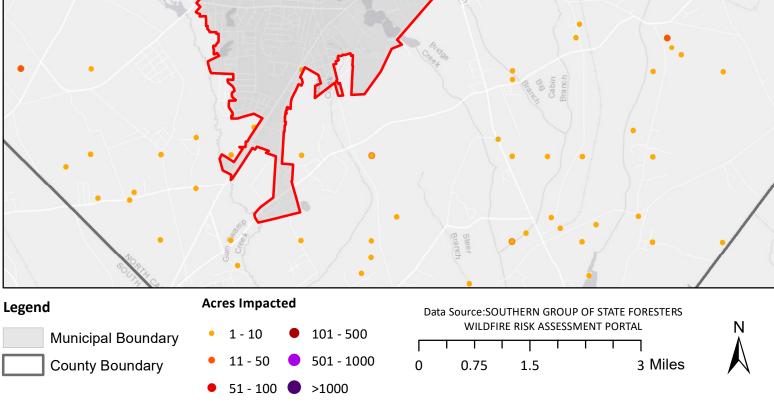
Gibson - Wildfire Events



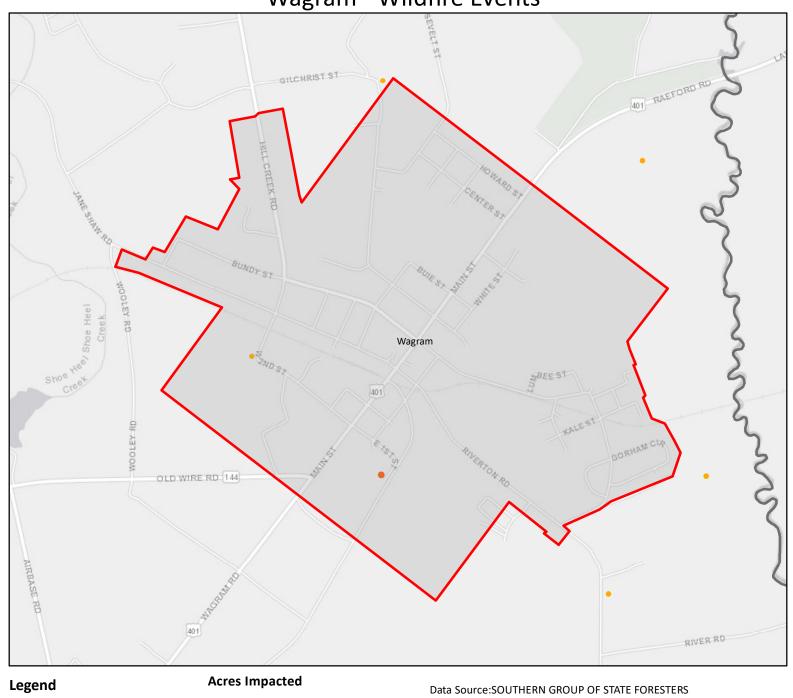


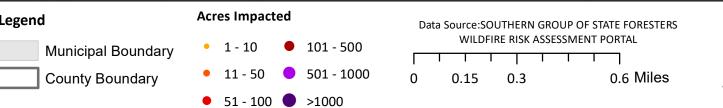
Laurinburg - Wildfire Events



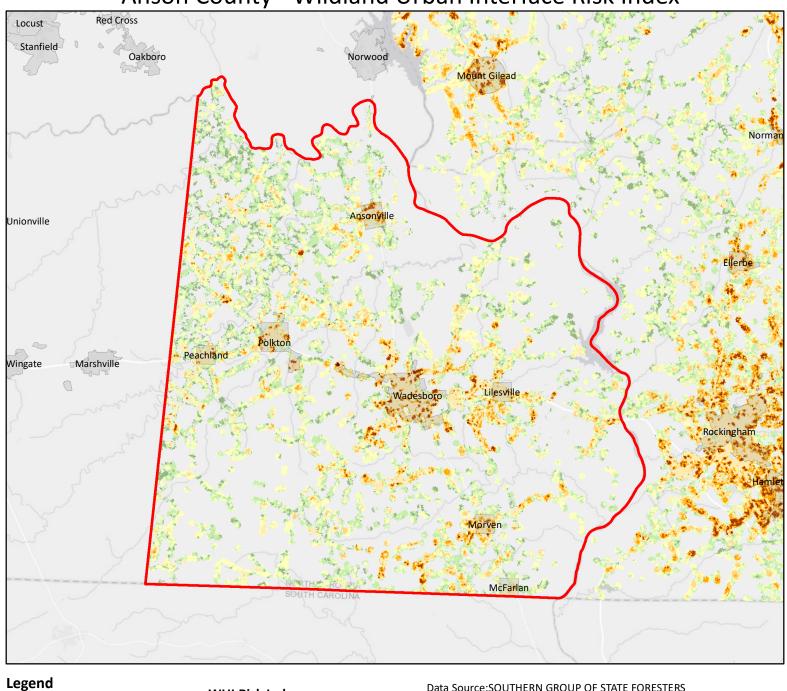


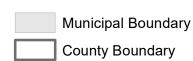
Wagram - Wildfire Events

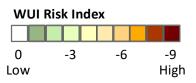


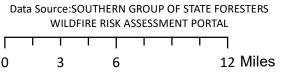


Anson County - Wildland Urban Interface Risk Index



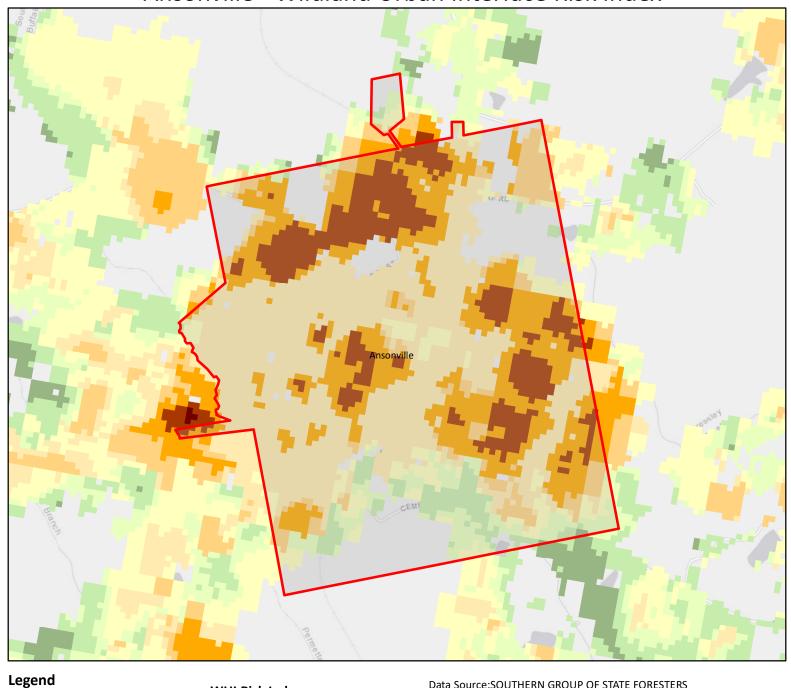


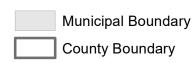


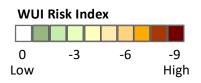


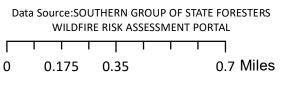


Ansonville - Wildland Urban Interface Risk Index



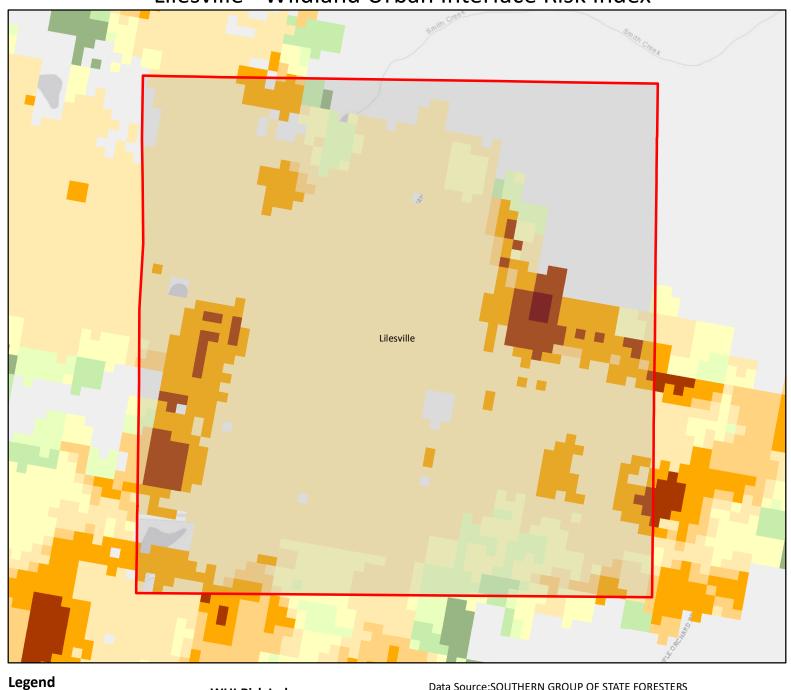


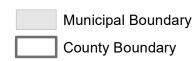


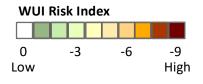


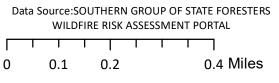


Lilesville - Wildland Urban Interface Risk Index



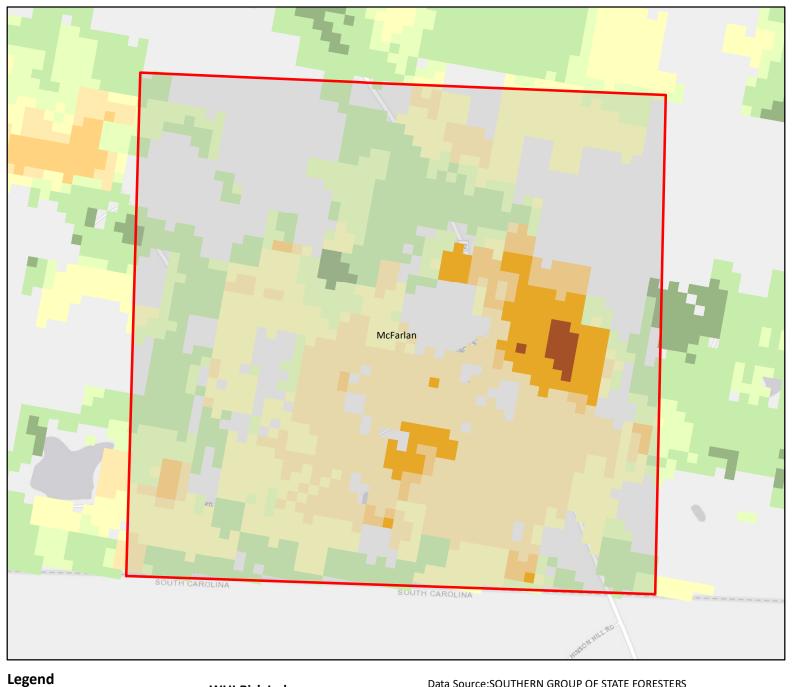




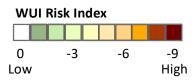


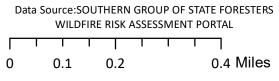


McFarlan - Wildland Urban Interface Risk Index



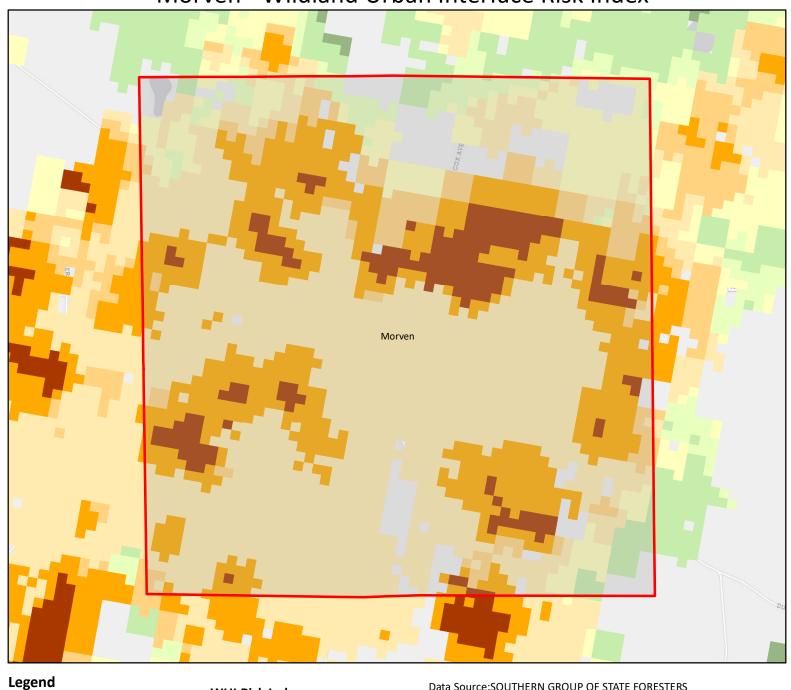


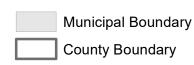


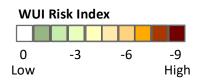


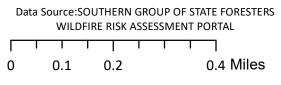


Morven - Wildland Urban Interface Risk Index



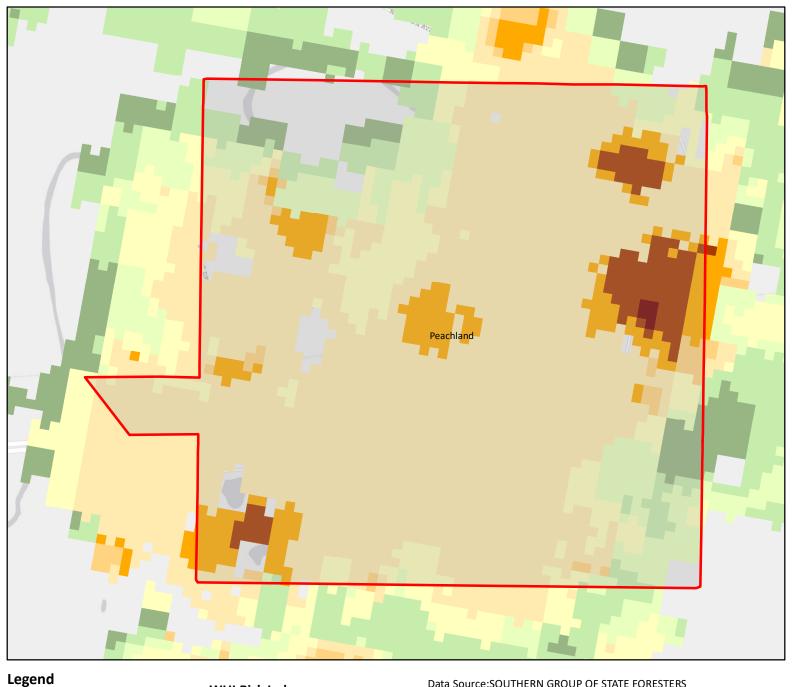


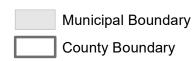


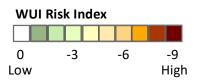


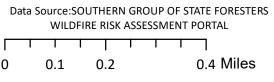


Peachland - Wildland Urban Interface Risk Index



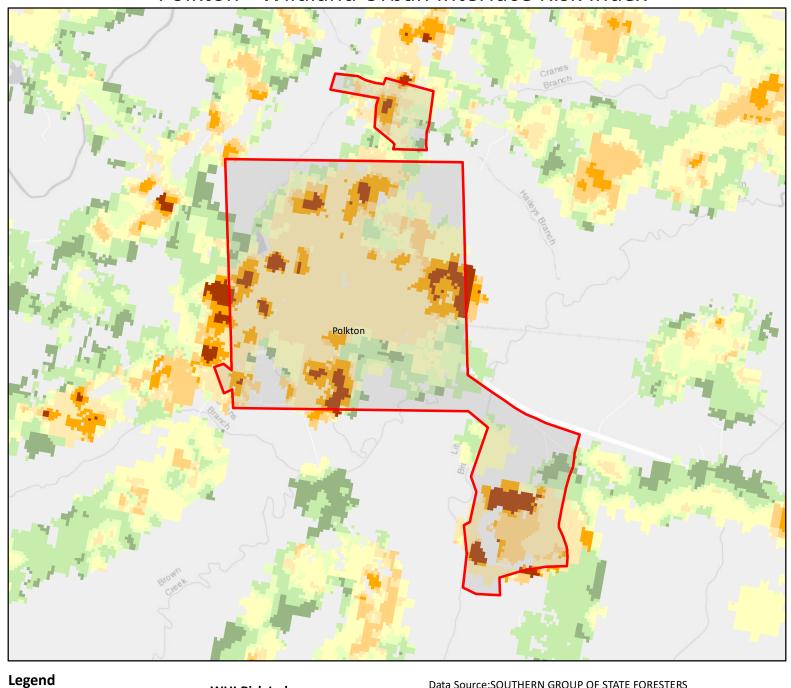


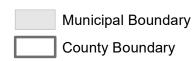


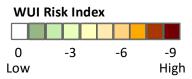


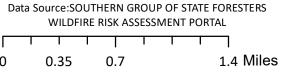


Polkton - Wildland Urban Interface Risk Index

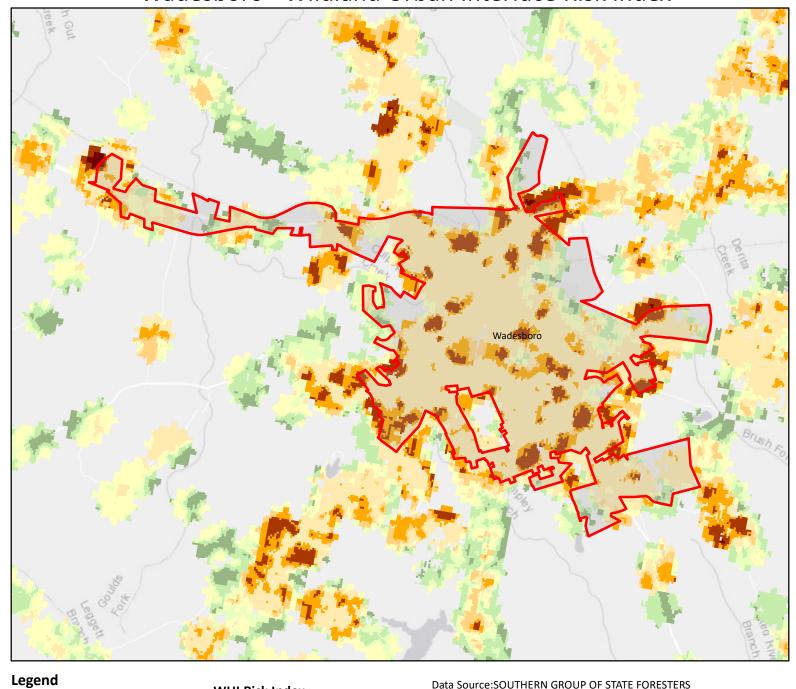


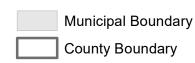


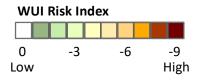


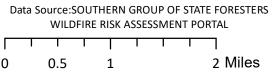


Wadesboro - Wildland Urban Interface Risk Index



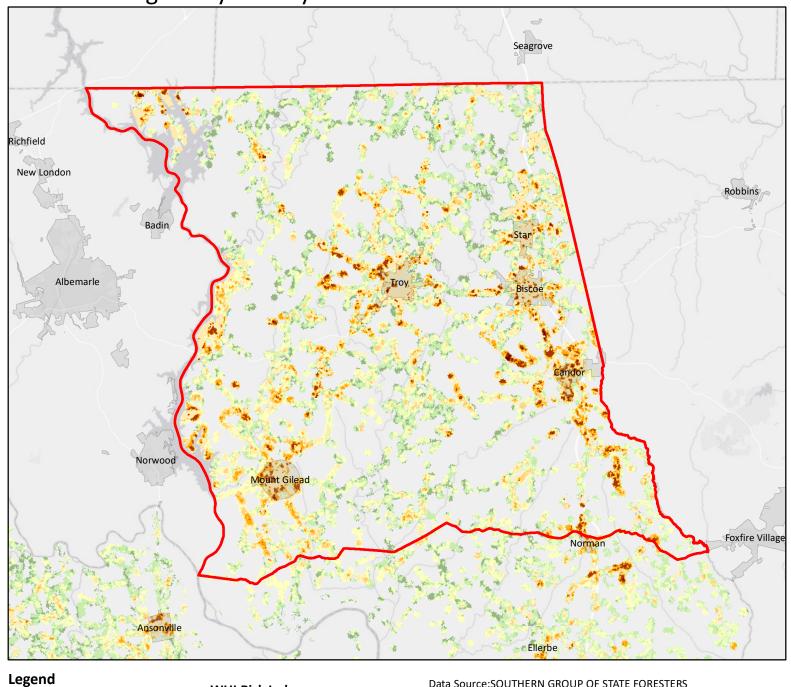


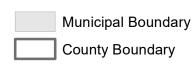


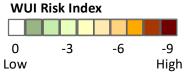


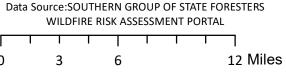


Montgomery County - Wildland Urban Interface Risk Index



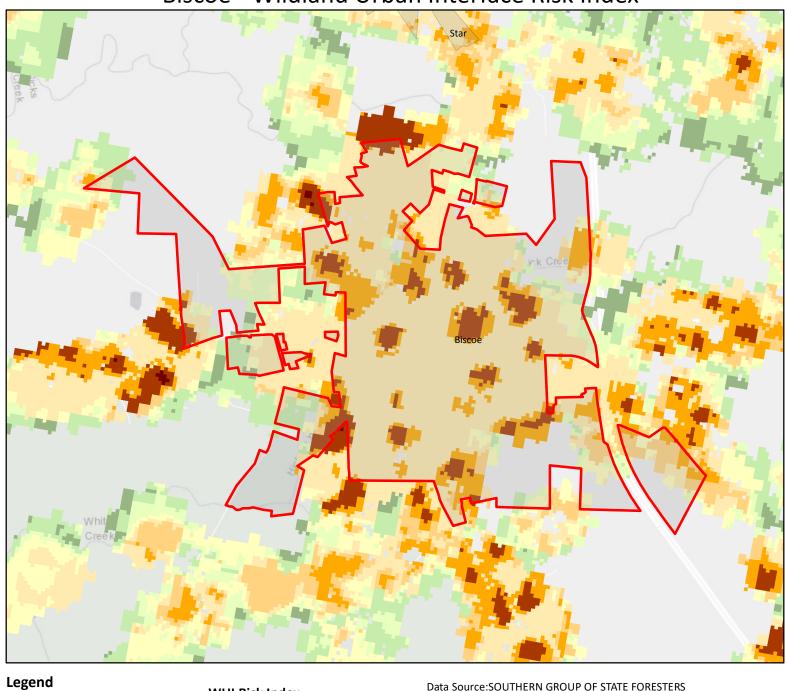


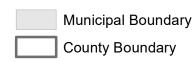


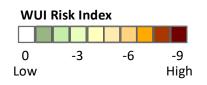


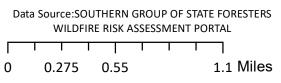


Biscoe - Wildland Urban Interface Risk Index



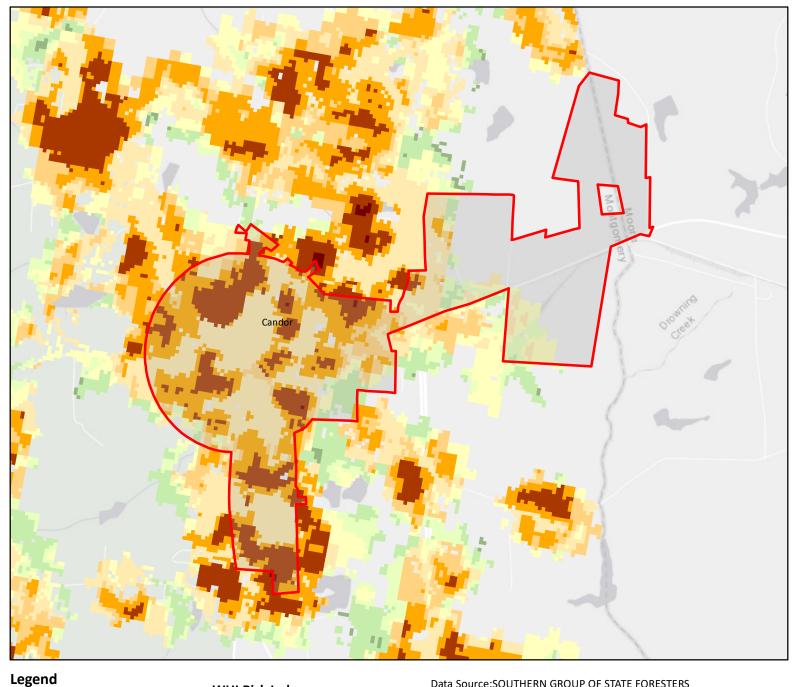


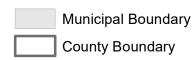


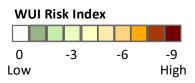


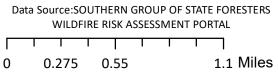


Candor - Wildland Urban Interface Risk Index



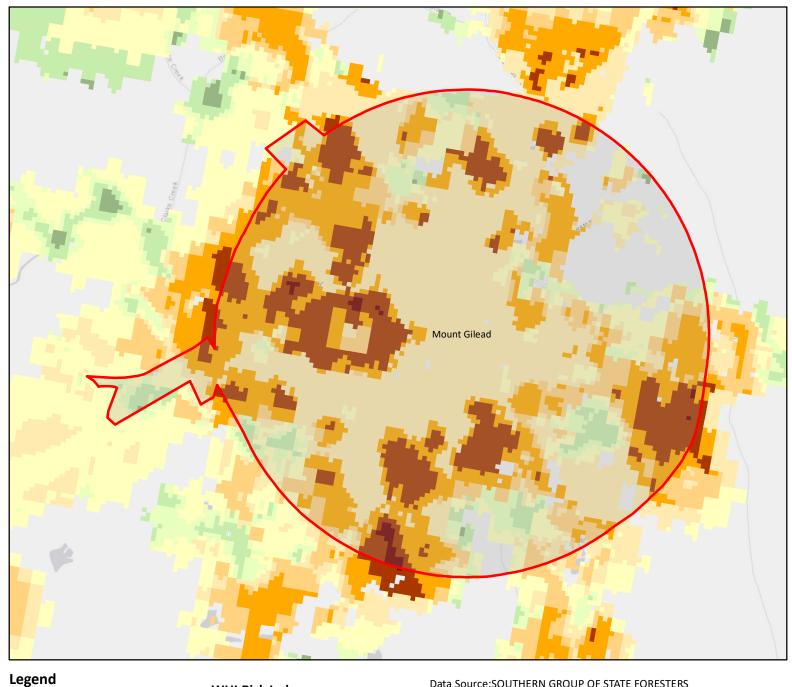


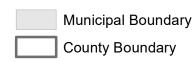


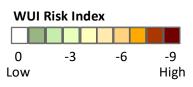


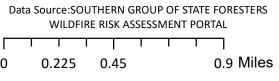


Mount Gilead - Wildland Urban Interface Risk Index



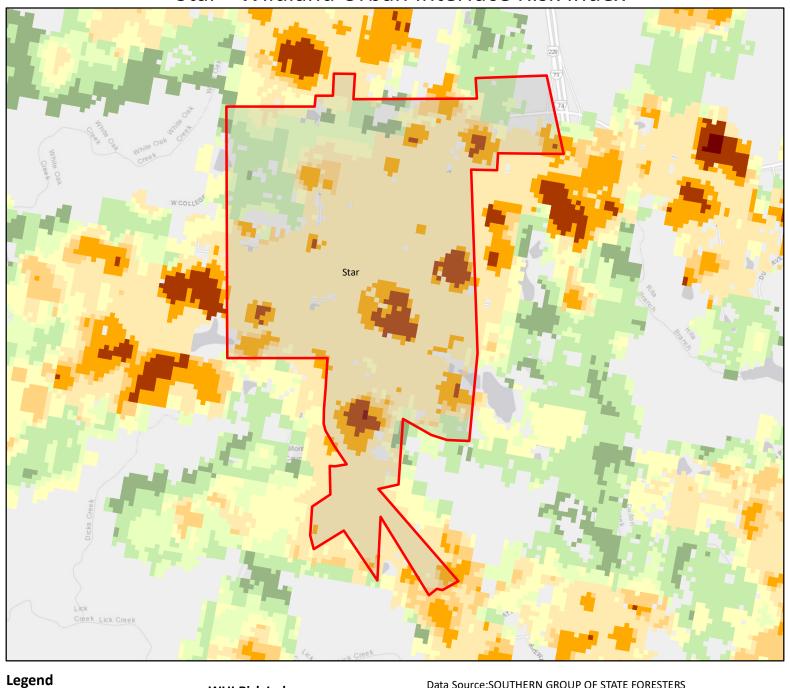


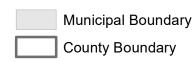


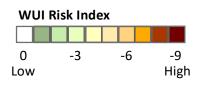


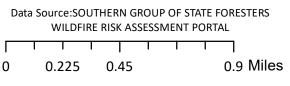


Star - Wildland Urban Interface Risk Index



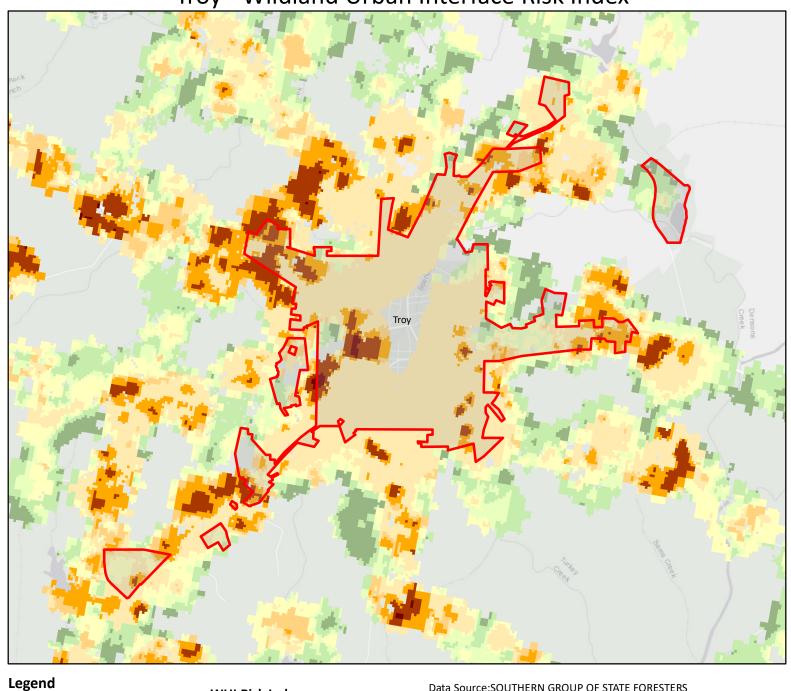


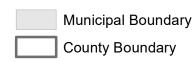


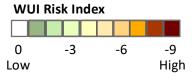


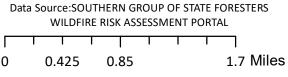


Troy - Wildland Urban Interface Risk Index



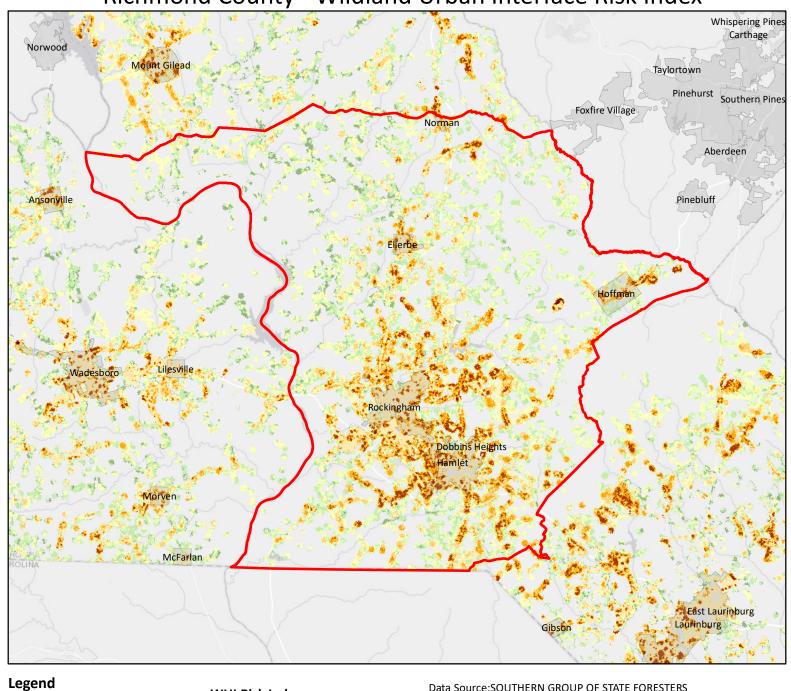


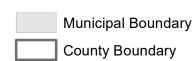


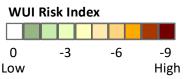


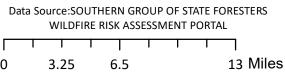


Richmond County - Wildland Urban Interface Risk Index



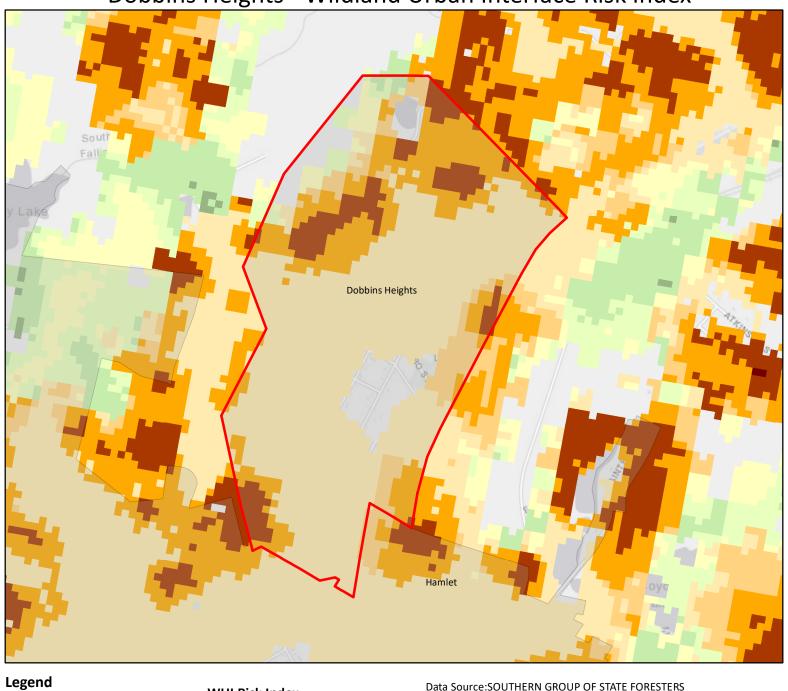


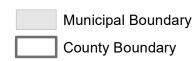


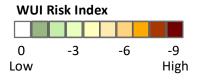


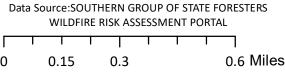


Dobbins Heights - Wildland Urban Interface Risk Index



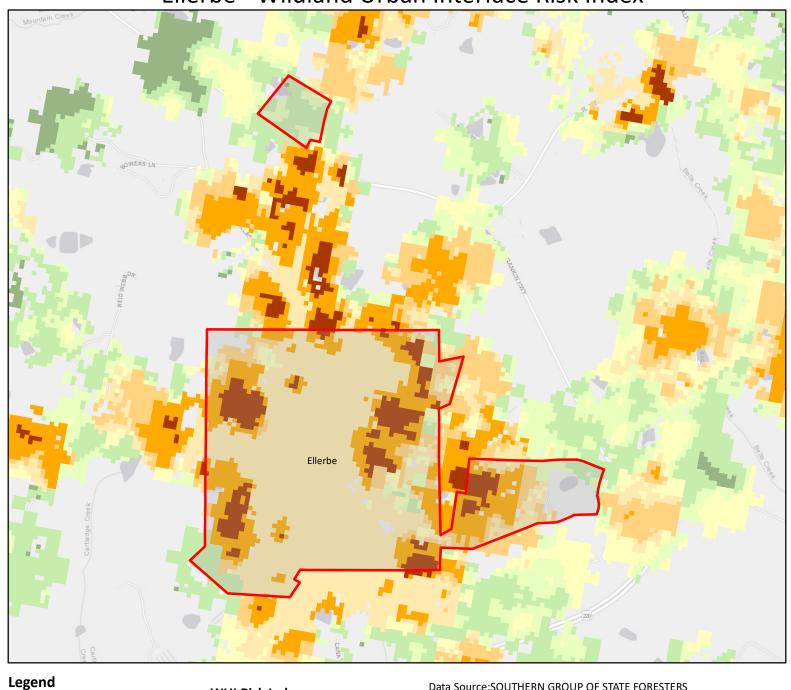


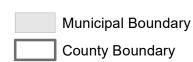


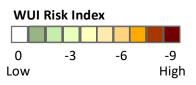


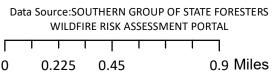


Ellerbe - Wildland Urban Interface Risk Index



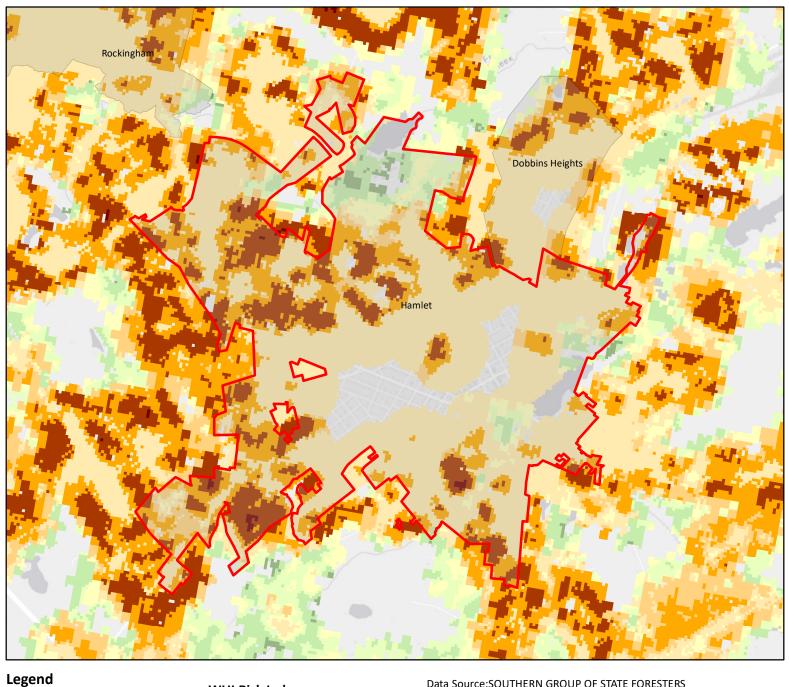


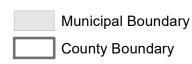


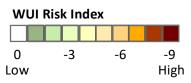


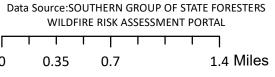


Hamlet - Wildland Urban Interface Risk Index



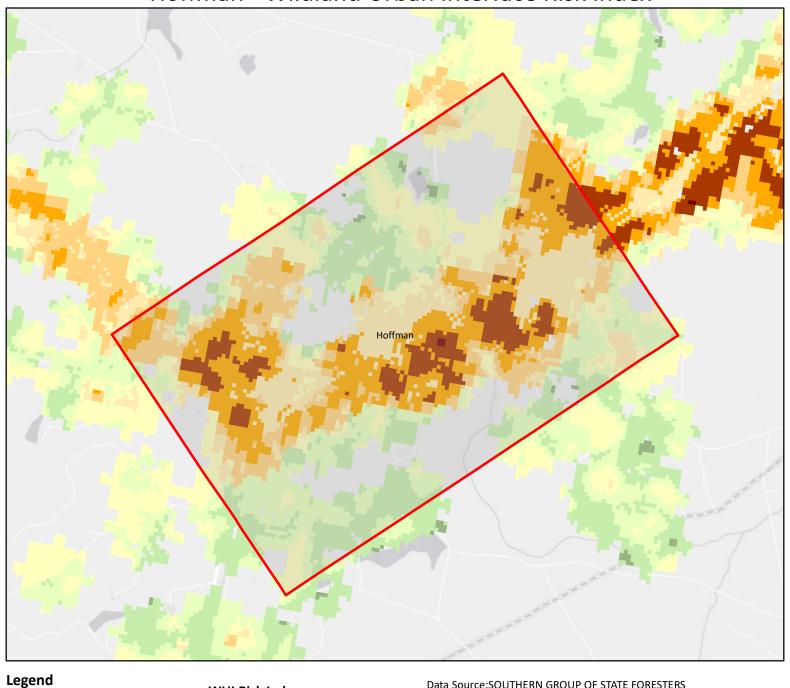


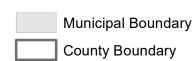


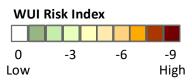


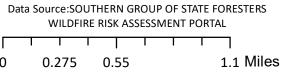


Hoffman - Wildland Urban Interface Risk Index



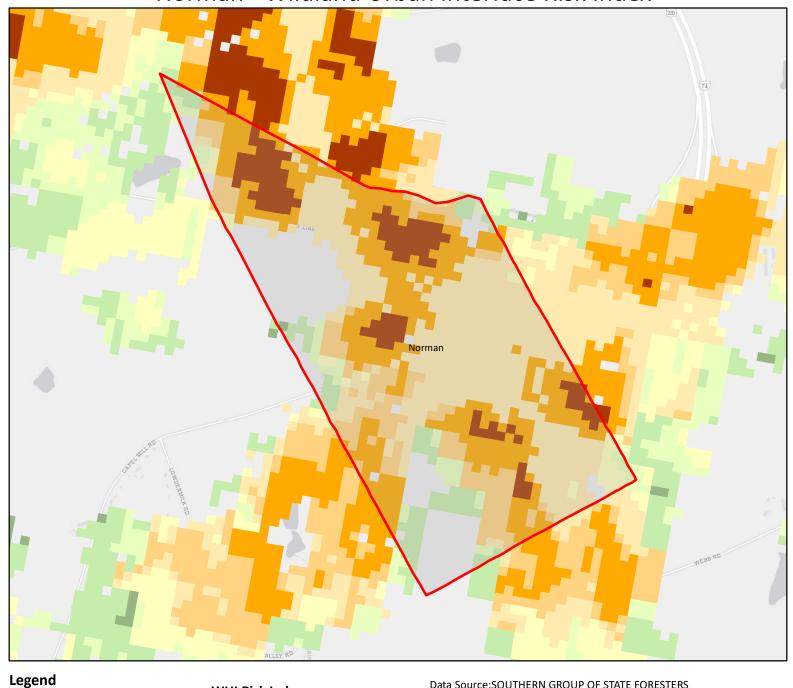


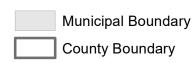


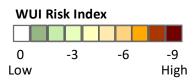


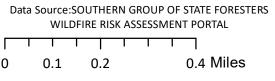


Norman - Wildland Urban Interface Risk Index



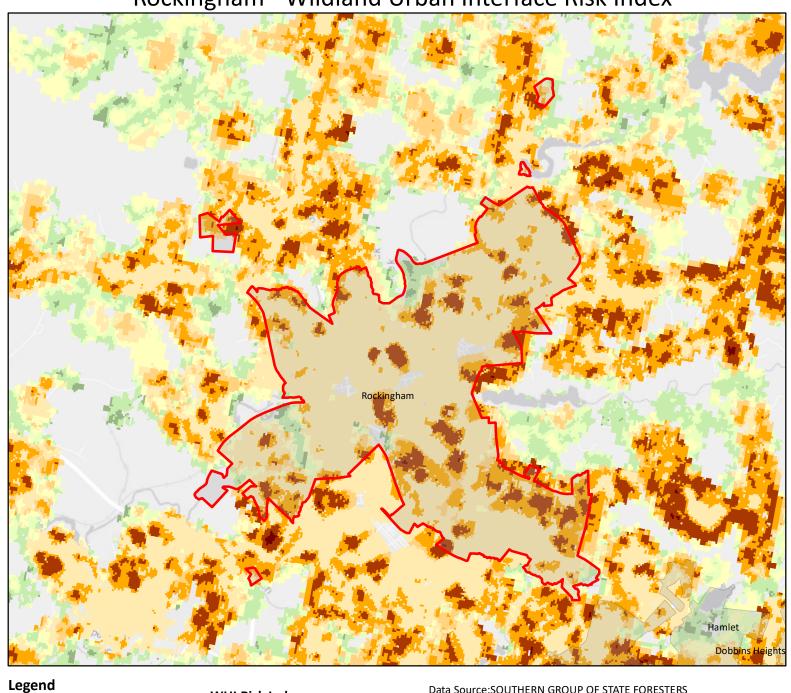


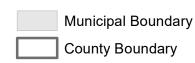


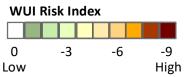


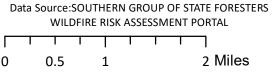


Rockingham - Wildland Urban Interface Risk Index



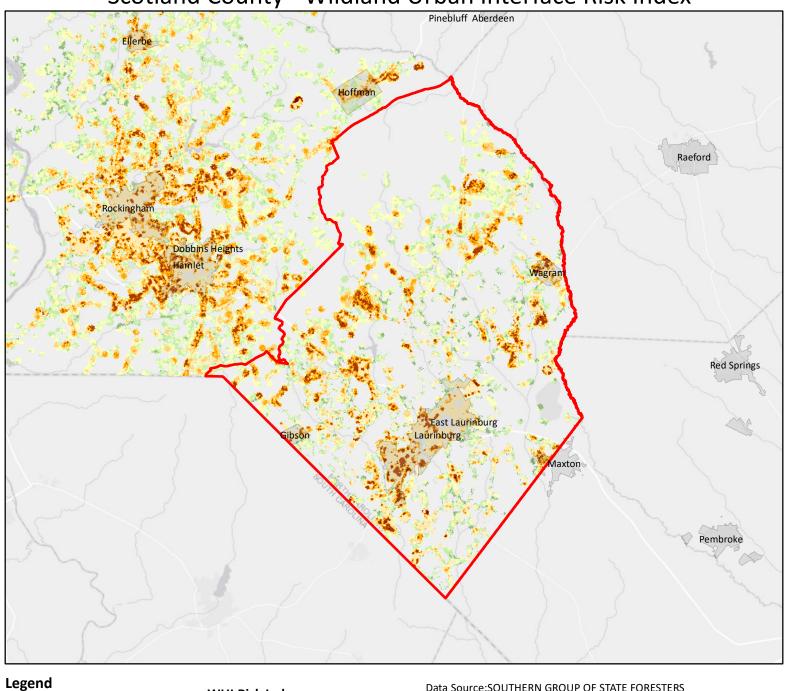


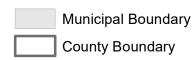


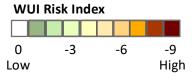


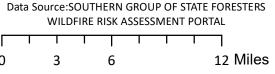


Scotland County - Wildland Urban Interface Risk Index



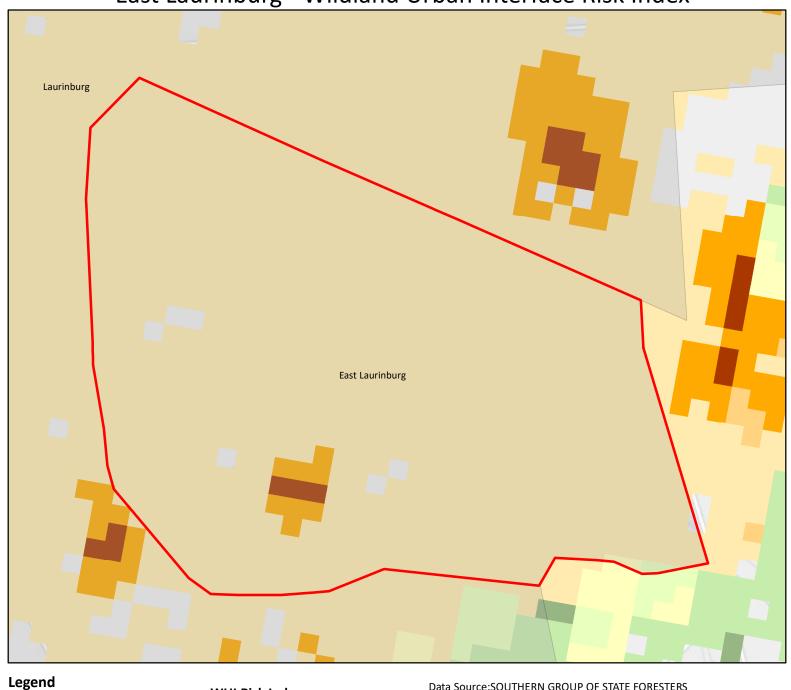




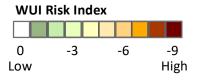


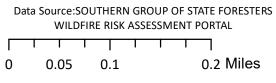


East Laurinburg - Wildland Urban Interface Risk Index



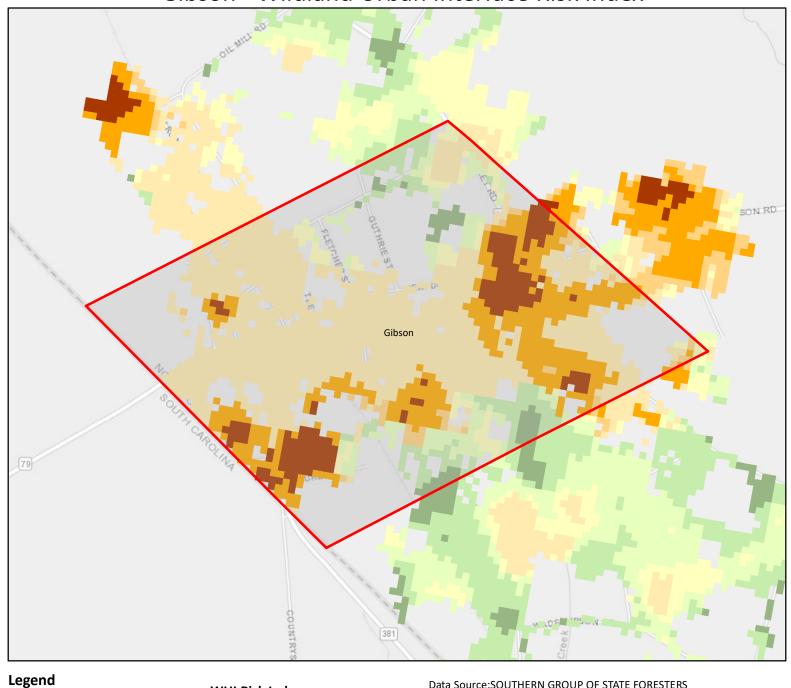




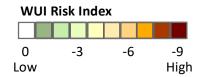


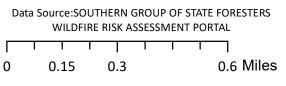


Gibson - Wildland Urban Interface Risk Index



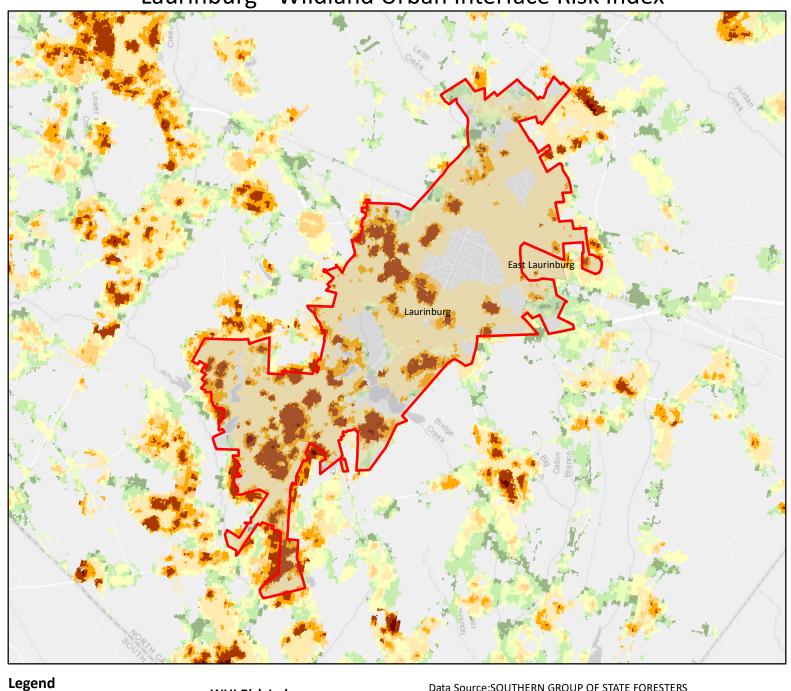


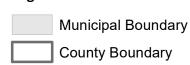


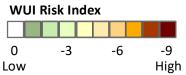


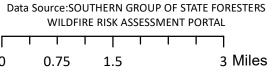


Laurinburg - Wildland Urban Interface Risk Index



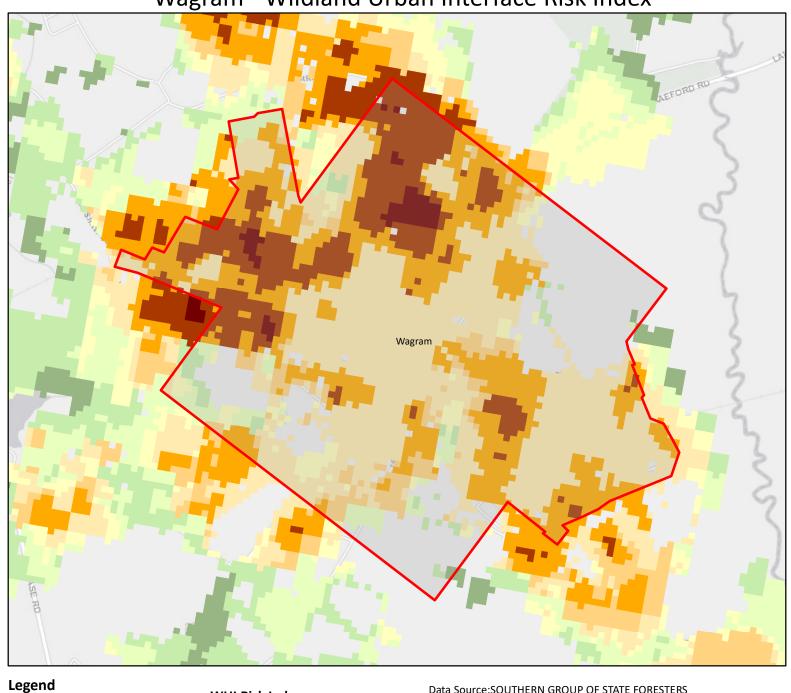


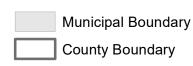


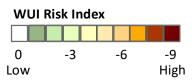


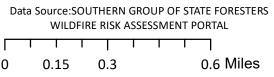


Wagram - Wildland Urban Interface Risk Index











Appendix H NCEI Storm Event Data

This section of the Plan includes the historic storm event data as reported to the National Centers for Environmental Information.

- ♦ H.1 Flood
- ♦ H.2 Hail
- ♦ H.3 Lightning
- ♦ H.4 Thunderstorm Wind
- ♦ H.5 Tornado
- ♦ H.6 Winter Weather

TABLE H.1: FLOOD EVENTS (2000-2020)

TABLE H.1: FLOOD EVENTS (2000-2020)						
Location	Date	Description				
	Anson County					
	3/20/2003	Persistent heavy rain brought widespread flooding across central North Carolina, beginning in the morning of March 20 and continuing into the afternoon. Numerous roads across the area had to be closed due to flooding, and numerous creeks overflowed their banks. Rainfall amounts were mainly between 2 and 4 inches in less than 12 hours. The heaviest rain fell in Forsyth County, where major flooding occurred along Muddy Creek, Mill Creek, and Grassy Creek, and several water rescues were needed.				
	4/10/2003	Persistent showers and thunderstorms produced heavy rain and flooding across the Piedmont of North Carolina. Several creeks and streams overflowed their banks, leading to road flooding and numerous road closures. Some basements of homes were flooded in Guilford County, and a water rescue was made in Moore County.				
Wadesboro	2/5/2010	Heavy rain resulted in widespread minor flooding resulting in the closure of several roads including Brown Creek Church Road, Lockhart Road, and side roads along Highway 52.				
Wadesboro	3/7/2014	Multiple roads flooded across the county.				
Long Pine	9/17/2018	Heavy rainfall of 6 to 8 inches caused widespread flooding across the county. Combined with additional rainfall upstream, the rainfall caused all-time record major flooding along the Rocky River near Norwood. Flooding damaged approximately 24 structures throughout the county, resulting in over \$5.6 million in property damage and and at least \$30 million in crop damage. Numerous roads were flooded all throughout the county. The Rocky River overflowed the Highway 52 bridge and reached the base of the Plank Road bridge.				
Pinkston	5/22/2020	High water was reported on several roads across the county.				
Montgomery County						
	3/20/2003	Persistent heavy rain brought widespread flooding across central North Carolina, beginning in the morning of March 20 and continuing into the afternoon. Numerous roads across the area had to be closed due to flooding, and numerous creeks overflowed their banks. Rainfall amounts were mainly between 2 and 4 inches in less than 12 hours. The heaviest rain fell in Forsyth County, where major flooding occurred along Muddy Creek, Mill Creek, and Grassy Creek, and several water rescues were needed.				
	4/10/2003	Persistent showers and thunderstorms produced heavy rain and flooding across the Piedmont of North Carolina. Several creeks and streams overflowed their banks, leading to road flooding and numerous road closures. Some basements of homes were flooded in Guilford County, and a water rescue was made in Moore County.				
Mt Gilead	2/5/2010	Heavy rain resulted in minor flooding across the county. Flood waters resulted in the closure of several roads including Chip Road and Lilly Bridge Road to Brickyard Road.				
Mt Gilead	3/7/2014	Multiple roads closed due to flooding across southern part of the county.				
Hydro	9/17/2018	Torrential rainfall of 8 to 10 inches caused widespread flooding across the county. Flooding damaged approximately 18 structures throughout the county, resulting in \$617 thousand in property damage and over \$20 million in crop damage. Numerous streets and roads were reported flooded.				
		Richmond County				
	3/20/2003	Persistent heavy rain brought widespread flooding across central North Carolina, beginning in the morning of March 20 and continuing into the afternoon.				

Location	Date	Description
		Numerous roads across the area had to be closed due to flooding, and numerous creeks overflowed their banks. Rainfall amounts were mainly between 2 and 4 inches in less than 12 hours. The heaviest rain fell in Forsyth County, where major flooding occurred along Muddy Creek, Mill Creek, and Grassy Creek, and several water rescues were needed.
Cordova	2/5/2010	Heavy rain resulted in minor flooding across the county. Flood waters resulted in the closure of several roads including Grassy Island Road, Peedee Church Road, John Ussery Road, Highway 1 at Bear Branch Road, and Mill Road near Hannah Pickett Avenue.
Everetts Mill	9/17/2018	Torrential rainfall of 10 to 15 inches caused widespread flooding across the county. Additional rainfall upstream resulted in major flooding at the Blewett Falls Dam along the Pee Dee River. Flooding damaged approximately 160 structures throughout the county, destroying 25 and resulting in over \$21.8 million in property damage. Crop damage was at least \$30 million. Numerous streets and roads were reported flooded.
		Scotland County
	9/8/2004	Water over two feet deep surrounded houses on Saymon Drive just outside of Laurinburg, with over six inches of water in many houses. Several people had to be rescued.
Hasty	9/17/2018	Torrential rainfall of 15 to 20 inches caused widespread flooding across the county and throughout the Lumber River basin. Flooding damaged approximately 168 structures throughout the county, resulting in over \$5.4 million in property damage and at least \$30 million in crop damage. Numerous roads were flooded all throughout the county.

TABLE H.2: HAIL EVENTS (2000-2020)

	111222 1112 2121110 (2000 2020)			
Location	Date	Size (in)	Description	
			Anson County	
Wadesboro	4/17/2000	0.75		
Ansonville	7/22/2000	0.75		
Wadesboro	4/1/2001	1		
Ansonville	3/31/2002	1.75	Golfball sized hail was reported near Sugartown Road and Polkville Road.	
Wadesboro	7/1/2002	1		
Countywide	5/3/2003	0.75		
Ansonville	5/25/2003	1		
Wadesboro	5/10/2005	1.75		
Ansonville	6/19/2005	0.75	Penny sized hail reported on US Highway 52.	
Wadesboro	10/21/2005	0.88		
Morven	5/14/2006	0.88		
Ansonville	6/11/2006	1.75		
Ansonville	6/11/2007	0.75	Upper jet dynamics associated with a 80 to 90 kt jet max combined with surface heating triggered thunderstorms across central and western portions of the piedmont.	
Wadesboro	6/12/2007	1	A strong mid and upper level shortwave trough moved across the area as it rotated on the back side of a deep closed upper cyclone off the Northeast Coast. The storms reached peaked intensity during peak heating.	

Location	Date	Size (in)	Description
Lilesville	7/27/2007	1	Relatively cool mid and upper level temperatures aloft associated with shortwave trough rotating around the upper low over the Great Lakes region resulted in widespread convection during strong daytime heating.
Wadesboro	7/27/2007	1	Relatively cool mid and upper level temperatures aloft associated with shortwave trough rotating around the upper low over the Great Lakes region resulted in widespread convection during strong daytime heating.
Burnsville	3/15/2008	1.75	Golf ball size hail was reported on Thomas Road.
Cedar Hill	5/20/2008	0.88	Nickel size hail occurred near Highway 32 south of Lake Tillery.
Morven	6/22/2008	1	During the afternoon and evening hours of June 22nd, numerous showers and thunderstorms developed from the Triad east across the Triangle and sandhills. Due to the strength of the upper level disturbance and cold air aloft, nickel to golf ball size hail was reported.
Ansonville	7/8/2008	0.75	Penny-size hail was reported along US Highway 52 in Ansonville.
Ansonville	8/2/2008	0.88	An upper level trough moving into the Mid Atlantic and Northeast, skirted just north of central North Carolina on the afternoon of August 2nd. The trough passage was close enough to trigger scattered showers and thunderstorms during peak heating. Some of the storms became severe, producing large hail, damaging winds, and flash flooding across portions of the western Piedmont, the Sandhills, and the southern Coastal Plain of North Carolina.
Deep Creek	8/7/2008	1.75	A severe thunderstorm produced a swath of quarter to golf ball size hail across southwest Anson county. One such report of large hail was received near Camden Church Road five miles east northeast of White Store.
Polkton	6/9/2009	1.75	Quarter to golf ball size hail was reported near Polkton.
Polkton	6/9/2009	0.75	Initial storms developed along a surface trough axis across central and eastern portions of North Carolina. Additional thunderstorms then developed later in the afternoon and evening as a weak upper level shortwave trough moved east across the area. There was widespread thunderstorm wind damage with the most significant damage concentrated in the Triad. Flash flooding became a threat during the evening in the northeast coastal plain with several streets closed in Edgecombe and Halifax Counties.
Wadesboro Jct	6/12/2009	0.75	Penny-size hail was reported at Twin Valley Country Club.
South Wadesboro	7/27/2009	0.88	Nickel size hail was reported at the Wadesboro Police Department.
South Wadesboro	7/27/2009	0.75	Penny size hail was reported along US Highway 74 at the KFC.
Lilesville	8/5/2009	0.75	Penny sized hail was reported in downtown Lilesville, North Carolina.
Pee Dee	7/17/2013	1	A moderately unstable air mass coupled with a weak disturbances crossing the area allow scattered thunderstorms to develop. A few of these storm became severe and produced damaging winds and severe hail across the Southern Piedmont and Western Sandhills.
Ansonville	5/3/2016	1	Quarter sized hail was reported in Ansonville.
			Montgomery County
Candor	5/21/2000	1	
Candor	4/1/2001	0.75	

Location	Date	Size (in)	Description
Troy	3/31/2002	0.88	
Candor	7/2/2002	0.75	
Uwharie	5/2/2003	0.75	
Pekin	5/3/2003	1.75	Golfball sized hail covered the ground.
Eldorado	5/3/2003	1	Quarter sized hail was covering the ground
Troy	5/3/2003	1	
Biscoe	5/25/2003	0.88	
Pekin	7/19/2003	0.88	
Troy	8/5/2003	1.75	
Steeds	5/23/2004	0.88	
Biscoe	4/17/2006	0.75	
Eldorado	5/14/2006	1.75	REPORTED IN THE TOWN OF ABNER AT HARLEY FARM ROAD AND ABNER ROAD.
Eldorado	5/14/2006	1.75	REPORTED IN THE TOWN OF OPHIR.
Troy	5/14/2006	1.75	
Troy	5/18/2006	1.75	REPORTED ON HWY 134.
Mt Gilead	6/23/2006	0.75	Reported near NC highway 2427 on Liberty Hill Church Road.
Eldorado	6/23/2006	0.75	
Mt Gilead	9/19/2006	0.75	
Troy	4/12/2007	0.88	Thunderstorms developed overnight in a strong baroclinic zone as a coastal trough spread inland from southeast to northwest into central North Carolinaeroding A hybrid CAD event. An area of low pressure developed along the coastal trough as a cold front approached from the west. Thunderstorms developed along the area of low pressure and in the warm and moist warm sector.
Emery	4/15/2007	0.75	Three rounds of severe weather struck Central North Carolina from the morning hours through the afternoon and into the evening. Widespread reports of damaging winds and large hail occurred with a rapidly intensifying surface low and attendant cold frontal passage. A powerful 70 knot low-level jet also aided in the initial round of severe storms. Thunderstorms re-developed in the late afternoon and evening hours as an amplifying upper level shortwave trough rotated across Central North Carolina.
Steeds	7/27/2007	0.88	Nickel size hail was reported just off of Highway 220.
Candor	3/15/2008	1.75	Golf ball size hail was reported in Candor. Law enforcement also spotted a funnel cloud.
Mt Gilead	3/15/2008	0.75	Penny size hail was reported 1 mile west of Mt. Gilead.
Capelsie	5/11/2008	0.75	Penny size hail was reported near the Highway 24/27 and 109 exchange.
Troy	5/11/2008	0.88	Secondary cyclogenesis along a wedge front boundary resulted in the development of severe convection as warm and unstable air overspread central North Carolina. The severe storms produced penny to nickel size hail with minor wind damage.
Moratock	4/10/2009	1.75	Golf ball size hail was reported.

Location	Date	Size (in)	Description
Abner	4/10/2009	0.75	Penny size hail was reported along Flint Hill Road, west of North Carolina Highway 134.
Uwharie	4/14/2009	0.75	Penny size hail lasted for one minute.
Wadeville	5/5/2009	0.75	Penny sized hail was reported along North Carolina Highway 109.
Moratock	7/20/2009	1.75	Golf ball size hail was reported along River Road in the Carolina Forest area.
Troy	7/20/2009	0.88	Nickel-size hail was reported along Highway 109 in Uwharrie.
Abner	7/13/2015	1	Quarter size hail was reported Flint Hill Road.
Troy	3/1/2017	1	Warm sector destabilization in advance of a strong cold front approaching from the west, allowed clusters and small lines of strong to severe thunderstorms to move east from the southern Appalachians during the afternoon, into the western and central Piedmont of NC during the evening. The storms produced several quarter size hail swaths across the western Piedmont, along with localized straight-line wind damage in Chatham County.
Star	8/11/2018	1	A deamplifying mid to upper level wave glanced a west to east oriented surface to 850mb front over central North Carolina and resulted in repeated updraft intensification and eastward propagation along the front, which allowed for several strong to severe storms to develop.
			Richmond County
Rockingham	5/3/2003	0.75	
Hoffman	5/3/2003	1.75	
Rockingham	5/3/2003	1.75	
Rockingham	8/5/2003	0.88	
Rockingham	5/14/2006	0.75	
Rockingham	5/14/2006	0.75	
Rockingham	6/12/2006	1	Quarter size hail covering the ground at Loch Haven Golf Course.
Rockingham	6/12/2007	0.75	Penny size hail was reported on Airport Road.
Hamlet	6/26/2007	0.75	Scattered thunderstorms developed during peak heating as sea breeze boundary moved inland.
Cognac	8/23/2007	1	Quarter size was reported about 3 miles south of the Highway 1 and 177 split.
Ledbetter	8/2/2008	1	An upper level trough moving into the Mid Atlantic and Northeast, skirted just north of central North Carolina on the afternoon of August 2nd. The trough passage was close enough to trigger scattered showers and thunderstorms during peak heating. Some of the storms became severe, producing large hail, damaging winds, and flash flooding across portions of the western Piedmont, the Sandhills, and the southern Coastal Plain of North Carolina.
Knob Hill	8/2/2008	1.75	An upper level trough moving into the Mid Atlantic and Northeast, skirted just north of central North Carolina on the afternoon of August 2nd. The trough passage was close enough to trigger scattered showers and thunderstorms during peak heating. Some of the storms became severe, producing large hail, damaging winds, and flash flooding across portions of the western Piedmont, the Sandhills, and the southern Coastal Plain of North Carolina.

Location	Date	Size (in)	Description
Knob Hill	8/2/2008	0.75	An upper level trough moving into the Mid Atlantic and Northeast, skirted just north of central North Carolina on the afternoon of August 2nd. The trough passage was close enough to trigger scattered showers and thunderstorms during peak heating. Some of the storms became severe, producing large hail, damaging winds, and flash flooding across portions of the western Piedmont, the Sandhills, and the southern Coastal Plain of North Carolina.
Norman	8/2/2008	0.75	An upper level trough moving into the Mid Atlantic and Northeast, skirted just north of central North Carolina on the afternoon of August 2nd. The trough passage was close enough to trigger scattered showers and thunderstorms during peak heating. Some of the storms became severe, producing large hail, damaging winds, and flash flooding across portions of the western Piedmont, the Sandhills, and the southern Coastal Plain of North Carolina.
Ellerbe	6/9/2009	0.75	Initial storms developed along a surface trough axis across central and eastern portions of North Carolina. Additional thunderstorms then developed later in the afternoon and evening as a weak upper level shortwave trough moved east across the area. There was widespread thunderstorm wind damage with the most significant damage concentrated in the Triad. Flash flooding became a threat during the evening in the northeast coastal plain with several streets closed in Edgecombe and Halifax Counties.
Lewarae	7/27/2009	0.75	Several bands of strong to severe thunderstorms developed across central North Carolina as a a shortwave trough moved across the region. The severe threat quickly transformed from a hail threat early in the event to a damaging wind episode as shortwave mid-level kinematics increased over the area.
Knob Hill	8/21/2011	1	A vigorous shortwave enhanced a surface trough across the region and combined with strong instability and an increasingly moist air mass to produce scattered severe thunderstorms. Mostly wind damage occurred with these storms, although a couple of reports of one inch hail were received as well. Also, isolated flash flooding was observed, which resulted in a road closure and a few additional reports of minor street flooding were reported.
Knob Hill	5/22/2012	0.75	Dime sized hail was reported near East Washington Road.
Rockingham	5/22/2012	0.75	Penny sized hail was reported in downtown Rockingham.
Rockingham Hamlet Ar	5/22/2012	1	Quarter sized hail was reported near Airport Road.
Cordova	8/2/2012	1	Quarter size hail was reported near East Rockingham and fell for about 10 minutes.
Hoffman	8/2/2012	1.75	Quarter to golf ball size hail was reported near Hoffman.
Norman	8/15/2012	0.75	Dime size hail was reported on Clayton Carriker Road.
Ledbetter Osborne	5/3/2016 4/14/2019	1	Quarter size hail fell along a swath from Ellerbe to near Hoffman. An initial round of convection developed in the wake of a northwestward propagating warm front as the atmosphere became increasingly moist and unstable during the afternoon. There was a brief lull in convective activity during the evening hours. Large scale forcing for ascent increased over
			central North Carolina through the overnight hours, downstream of a slightly positively tilted synoptic trough. An approaching quasi-linear

Location	Date	Size (in)	Description
		(,	convective system moved through the area overnight, producing widespread wind damage, isolated flash flooding and a weak tornado.
			Scotland County
Laurel Hill	4/28/2000	0.88	Nickel size hail reported near Crawford Lake Road.
Laurinburg	5/21/2000	0.75	
Laurinburg	6/3/2000	1	
Laurinburg	5/2/2003	0.75	
Laurel Hill	5/3/2003	1.75	Hail from golfball sized to dime sized covered the ground, clogging storm drains.
Laurinburg	5/3/2003	1.75	
Laurel Hill	5/3/2003	1.75	
Laurinburg	5/3/2003	0.75	
Laurel Hill	5/3/2003	1.75	
Laurel Hill	5/3/2003	1.75	
Laurinburg	5/31/2003	1.75	
Laurinburg	4/10/2004	0.75	
Laurinburg	1/3/2006	0.88	
Laurinburg	1/3/2006	0.88	
Laurinburg	5/26/2006	0.75	OBSERVED IN THE JOHNS COMMUNITY.
Laurinburg	6/8/2006	1	
Laurinburg	6/12/2006	1	Reported in the City of Laurinburg.
Laurinburg	4/3/2007	0.88	A warm front advected higher dewpoint air of lower to mid 60s into the southern piedmont and sandhills in the afternoon and evening hours. Strong insolation resulted in moderate instability across the south, however deep westerly flow kept thunderstorm coverage isolated.
East Laurinburg	5/5/2008	0.88	Nickel size hail occurred near the intersection of Leesville Road and Highland Road.
East Laurinburg	5/5/2008	1	Nickel to quarter size hail was reported at the intersection of Highway 74 and Highland Road.
Laurinburg	6/11/2008	1.75	Storms initiated along a nearly stationary boundary across southern sections of the piedmont and coastal plain regions with additional development along a well defined outflow boundary. The severe storms produced strong damaging winds and large hail up to the size of golf ball.
Laurinburg	8/2/2008	0.75	An upper level trough moving into the Mid Atlantic and Northeast, skirted just north of central North Carolina on the afternoon of August 2nd. The trough passage was close enough to trigger scattered showers and thunderstorms during peak heating. Some of the storms became severe, producing large hail, damaging winds, and flash flooding across portions of the western Piedmont, the Sandhills, and the southern Coastal Plain of North Carolina.
Crossway	8/7/2008	0.75	Penny size hail was reported to the south southwest of Laurinburg.
Hasty	5/11/2009	0.75	Penny size hail was reported at Scotch Meadows Country Club.
Sneads Grove	6/1/2009	1.75	Golf ball size hail was reported on Camp Monroe Road, north of Laurinburg.
Wagram	6/9/2009	1	Quarter-size hail lasted several minutes in Wagram.

Location	Date	Size (in)	Description
Hasty	6/17/2009	0.75	Penny-size hail was reported at Scotch Meadows Golf Course.
Gibson	8/17/2009	0.88	Isolated severe thunderstorms developed across central North Carolina as a weak upper level disturbance tracked across the area and interacted with a warm moist atmosphere.
Crossway	7/1/2012	1	A lee side surface trough interacted with a very unstable atmosphere and produced clusters of showers and thunderstorms. Some of these storms became severe and produce large hail and damaging winds across all of central North Carolina.
Crossway	4/19/2013	1	Quarter size hail was reported near Laurinburg.
Hasty	6/19/2014	1.75	There were two reports of ping pong to golf ball size hail near the state line.
Scotch Grove	6/25/2018	0.75	Strong to severe convection initially developed in a region of weak to moderately instability in the vicinity of surface boundary near the North Carolina, South Carolina border. Subsequently a line of severe thunderstorms developed in Tennessee in association with a southeast advancing mesoscale convective vortex that moved across the mountains and then across central North Carolina.
Crossway	6/25/2018	1	Strong to severe convection initially developed in a region of weak to moderately instability in the vicinity of surface boundary near the North Carolina, South Carolina border. Subsequently a line of severe thunderstorms developed in Tennessee in association with a southeast advancing mesoscale convective vortex that moved across the mountains and then across central North Carolina.

TABLE H.3: LIGHTNING EVENTS (2000-2020)

		` ,
Location	Date	Description
		Anson County
McFarlan	6/26/2010	Lightning strike burned a home to the ground off of Sneedsboro Road one mile east of United States Highway 52.
		Montgomery County
Mt Gilead	7/9/2010	Lightning struck a home in Mt. Gilead. Monetary damages are unknown.
Mt Gilead	7/9/2010	Lightning struck a home in Mt. Gilead. Monetary damages are unknown.
		Scotland County
Crossway	6/25/2010	Lightning damaged four computers and two televisions at the Emergency Operations Center.
East Laurinburg	6/26/2010	Auto Recyclers was destroyed by a fire when lightning struck the business.

TABLE H.4: THUNDERSTORM WIND EVENTS (2000-2020)

Location	Date	Description
		Anson County
Wadesboro	8/18/2000	Trees and power lines down.
Wadesboro	12/17/2000	Panels were blown off gas tanks at a local store, and power outages were reported.
Peachland	4/1/2001	Many trees were downed in the southern and western part of the county.

Location	Date	Description
Burnsville	5/13/2002	Trees were blown down.
Morven	7/3/2002	Trees were blown down.
Countywide	5/2/2003	Trees were blown down across the county.
Wadesboro	7/21/2003	Winds damaged athletic fields at Anson High School. Bleachers were lifted over a fence, and the scoreboard and ticket booth were damaged.
Morven	7/22/2003	Trees were blown down along Highway 1.
Countywide	6/23/2004	Numerous trees were blown down across the southern and western portions of the county.
Central Portion	3/8/2005	A few trees were blown down in Ansonville and Lilesville. A porch was ripped of a trailer near Wadesboro, and a roof was torn off a barn. Further south, in Morven, a roof was partially torn off of a home.
Wadesboro	7/28/2005	Numerous trees and power lines were blown down.
Wadesboro	7/28/2005	Trees were blown down along SR 742 near Cason Oil Field.
Ansonville	8/14/2005	Trees blown down along Route 1628
Wadesboro	1/13/2006	One large tree down across HWY 109 SOUTH.
Wadesboro	6/11/2006	Tree down off NC Highway 109 on Pleasant Hill Church Road.
Wadesboro	6/11/2006	Trees down near NC highway 742 and Brown Creek Church Road.
Wadesboro	6/11/2006	Trees down on NC Highway 109.
Polkton	7/15/2006	Couple of trees down.
Wadesboro	7/15/2006	Large tree down on power linesblocking roadway near the intersection of Gold Mine and Country Club roads.
Morven	7/15/2006	Trees down near the intersection of Gatewood and Country Club roads.
Central Portion	7/19/2006	Trees down.
Polkton	7/20/2006	Power lines reported down in the town of Polkton.
Ansonville	7/22/2006	Two trees down on HWY 52 North.
Ansonville	8/7/2006	Trees down on route 52 near the Anson/Stanly county line.
Wadesboro	9/28/2006	Trees reported down along HWY 742 and 74.
Ansonville	11/16/2006	Trees down on Racetrack Road near Burnsville.
Burnsville	11/16/2006	Trees down on Racetrack Road.
Wadesboro	3/2/2007	Scattered trees down county wide.
Morven	6/13/2007	The Department of Transportation reported several trees down blocking roads in the area.
Peachland	6/30/2007	A large tree was reported blown down on Highway 74.
Ansonville	8/21/2007	Multiple trees blown down at several locations in the Burnsville and Pee Dee communities.
Cairo	8/23/2007	One tree was blown down along Highway 145.
Mc Farlan	8/23/2007	One tree was blown down near the intersection of 52 South and Sneedsboro Road.
Cairo	8/23/2007	One tree was blown down near the intersection of Highway 145 and Pitt Road.
South Wadesboro	3/4/2008	Numerous trees were reported blown down throughout the county.
Ansonville	3/15/2008	One tree was blown down across Pinkston River Road.
Mc Farlan	4/4/2008	Trees were blown down on SR 1003.

Location	Date	Description
Burnsville	4/4/2008	Trees were blown down on SR 1606.
Morven	6/22/2008	Numerous trees were blown down along Highway 52 just north of Morven. A few trees fell on homes and outbuildings in the area causing minor structural damage.
Mc Farlan	6/23/2008	High winds caused structural damage to the roof of a barn.
Burnsville	7/6/2008	Trees were blown down on Highway 742, just north of Burnsville.
Pinkston	7/8/2008	Several trees were blown down onto a house near NC-Highway 109.
Fountain Hill	7/9/2008	One tree was blown down across Bowers Road near NC Highway 218.
Lilesville	7/9/2008	One tree was blown down across Stanback Ferry Road.
Burnsville	7/23/2008	One tree was blown down across NC Highway 742, near the county line.
South Wadesboro	7/31/2008	Numerous trees and power-lines were blown down in Wadesboro.
South Wadesboro	8/2/2008	An air conditioning unit was blown off a building in Wadesboro.
Ansonville	8/2/2008	Severe thunderstorms knocked down numerous trees and power lines in Ansonville.
Pinkston	8/2/2008	Straight line winds knocked down several trees just to the north of Wadesboro.
Wadesboro	8/15/2008	Law enforcement reported several trees which were blown down on White Store Road.
Burnsville	5/28/2009	One tree was blown down across Cedar Grove Road.
Burnsville	6/11/2009	One large tree down along Highway 742 west of Ansonville.
Lilesville	7/27/2009	Several trees were blown down near the intersection of Haileys Ferry Road and Wall Road in Lilesville.
Polkton	7/28/2009	Multiple trees were reported down in the town of Polkton, North Carolina.
Burnsville	7/31/2009	Several trees were blown down on High Rock Crusher Road near Polkton.
Polkton	8/5/2009	One tree was reported down across Prison Camp Road.
Peachland	8/5/2009	One tree was reported down in the intersection of Horne-Town Road and Lower White Store Road.
Wadesboro Jct	5/28/2010	One tree was reported down on a house on North Carolina Highway 145 and several trees were in the road along Highway 145 at Cason Oldsfield Road. Numerous trees were also reported down between Southwest Morven and North Lilesville.
Deep Creek	6/13/2010	Anson County dispatchers reported a trees down along Highway 109 southwest of Wadesboro.
Ansonville	6/14/2010	Several trees were blown down around Ansonville blocking Hill Road and Mount Vernon Road.
Burnsville	6/29/2010	Several trees were reported down at Olive Branch Road and Cappadocia Church Road.
Ansonville	7/9/2010	Several trees were blown down along Ansonville Polkton Road near Ansonville.
Peachland	7/13/2010	Two trees were blown down near the intersection of Deep Spring Church Road and German Hills Road.
Peachland	12/1/2010	Trees were blown down on Savannah Road and Beverly Street.
Polkton	4/5/2011	Several trees were blown down along a swath from near Polkton to near Morven.
Burnsville	6/12/2011	Numerous trees were blown down along a swath from near Burnsville to near Morven. Within this swath, multiple trees were blown down onto power lines

Location	Date	Description
		near Wadesboro, causing at least one transformer fire. Also in Wadesboro, a tree
		fell onto a car, but no damage information was available.
Gravelton	6/18/2011	A tree limb snapped and killed a 39 year old woman on Blewett Falls Road in Lilesville. The strong winds associated with the storm were out in advance of the heavy rain.
Ansonville	6/18/2011	Two trees were blown down along Ansonville-Polkton and Mt. Vernon roads.
Wadesboro Jct	6/21/2011	Multiple trees were blown down along the swath with most of the tree damage concentrated in the Polkton and McFarlan areas.
Wadesboro	7/4/2011	One tree was blown down on a power pole on Lennox Drive.
South Wadesboro	7/4/2011	Tree was blown down on utility pole.
Pinkston	7/13/2011	One tree was down off of North Carolina Highway 109.
Burnsville	7/13/2011	One tree was reported down on North Carolina Highway 742 near the Anson County Line.
Peachland	7/25/2011	A few trees were blown down along a swath from near Peachland to near Oakboro.
Polkton	7/31/2011	Several trees were blown down along the wind swath, including down trees on Hopewell Church Road, Bill Curlee Road, and Pleasant Hill Church Road.
Peachland	8/8/2011	Several trees were blown down, including down trees on Lower White Store Road, Mineral Springs Road, and Poplar Hill Church Road.
Wadesboro	9/2/2011	Scattered trees were blown down across the county.
White Store	7/1/2012	One tree was partially blocking Tice Road near White Store Road.
Fountain Hill	7/1/2012	One tree was reported down near 7225 Deep Springs Church Road.
White Store	7/1/2012	One tree was reported down near the intersection of Upper White Store Road and Lower White Store Road.
Long Pine	7/1/2012	One tree was reported down on Little Huntley Road and Long Pine Church Road.
Deep Creek	7/1/2012	One tree was reported down on power lines along Little Huntley Road near North Carolina Highway 109.
Peachland	7/1/2012	One tree was reported down on Upper White Store Road.
Polkton	7/5/2012	Several trees were reported down between Polkton and North Carolina Highway 742.
Ansonville	7/8/2012	Multiple trees were blown along NC Highway 52.
Peachland	7/9/2012	Numerous trees and power-lines were blown down along the swath. One carport was also damaged in Lilesville. Damages were estimated.
Ansonville	7/28/2012	One tree was blown down.
Gravelton	7/28/2012	One tree was blown onto power lines.
South Wadesboro	4/19/2013	Numerous trees were blown down across the county.
Pinkston	6/13/2013	Numerous trees and power lines were blown down, especially across the northern half of the county.
Pee Dee	6/27/2013	One tree was blown down on Power Plant Road.
Polkton	6/30/2013	A couple of trees were blown down along a swath from near Polkton to near Ansonville.
Gravelton	7/17/2013	Several trees were blown down across Hailey's Ferry Road.
Pinkston	2/21/2014	One tree and power-line blown down along Highway 109 South.

Location	Date	Description
Peachland	5/27/2014	Several trees were reported down in the southwestern part of Anson County, especially on Lowery Road.
Polkton	10/11/2014	One tree was blown down on Route 1418.
Pinkston	10/11/2014	One tree was blown down on Route 742.
Cedar Hill	6/1/2015	Several trees were blown down on Planck Road in the Ansonville area.
Pinkston	6/18/2015	One tree was blown down on Route 109 southeast of Ansonville.
South Wadesboro	6/30/2015	Multiple trees were blown down across the county.
Deep Creek	2/24/2016	A power line was blown down on Union Church Road near Highway 109 South.
Polkton	2/24/2016	A tree was blown down on McSwain Road near Highway 742 North and Johnson Road.
Lilesville	7/8/2016	Several trees were reported down in the Lilesville area.
Wadesboro	7/15/2016	Multiple trees and power-lines were blown down across the city of Wadesboro. Damages were estimated.
South Wadesboro	7/16/2016	Trees were reported down across the county.
Cedar Hill	8/27/2016	One tree was reported down near the intersection of United States Highway 52 and Old United States Highway 52.
Bethel	4/3/2017	A tree and power lines were blown down at the intersection of NC-109 South and Horton Road.
Ansonville	5/1/2017	Trees were reported down on power lines.
South Wadesboro	5/5/2017	Multiple trees were reported down across the county, including Bill Curllee Road and Highway 742.
Wadesboro	5/24/2017	Numerous trees were blown down across the county.
South Wadesboro	5/25/2017	Trees and power-lines blown down in the city.
Anson Co Arpt	5/25/2017	Trees and power-lines blown down on N. Green Street.
Wadesboro Jct	5/25/2017	Trees were blown down on Stanback Ferry Ice Plant Road.
Burnsville	6/19/2017	A few trees were blown down along a swath from Race Track Road to Cribbs Creek Road west-northwest of Ansonville.
Burnsville	7/5/2017	A couple of trees were blown down on Thomas Road in Polkton.
Wadesboro Jct	7/18/2017	Multiple trees were reported down on Morven Road.
Lilesville	4/15/2018	Several trees were blown down across the eastern half of Anson county, including the town of Lilesville.
Burnsville	6/25/2018	One tree was reported down across Race Track Road.
Peachland	6/25/2018	One tree was reported down along United States Highway 74 in Peachland.
Burnsville	7/6/2018	A large tree was reported down blocking Olive Branch Road, between Edwards Store Road and Cappadocia Church Road.
Pinkston	8/2/2018	One tree was blown down on NC-109, outside of Wadesboro.
Pinkston	9/10/2018	One tree was reported down on Grassy Island Road.
Pinkston	9/10/2018	One tree was reported down on power lines near the intersection of Pleasant Grove Church Road and Dennis Road.
Anson Co Arpt	4/19/2019	Multiple trees reported down on Highway 109 South.

Location	Date	Description
White Store	4/19/2019	Trees reported down in White Store.
Wadesboro	4/19/2019	Trees reported down on Kitty Bennett Road.
Ansonville	4/19/2019	Trees reported down on U.S. Highway 52 near Grassy Island Road.
Deep Creek	5/4/2019	One tree was reported down along State Route 742 near the South Carolina state line.
Peachland	6/22/2019	Numerous trees were reported down across Anson County.
Wadesboro	6/22/2019	Trees were reported down on North Carolina Highway 742.
Peachland	6/22/2019	Trees were reported down on Savannah Road and power lines were reported down a Lower White Store Road and Mineral Spring Church Road.
Wadesboro Jct	6/22/2019	Trees were reported down on United States Highway 52 and Country Club Road.
Bethel	1/11/2020	One tree was reported down on City Pond Road near North Carolina Highway 742.
Peachland	5/22/2020	Numerous trees, power lines, and power poles were reported down across the county.
		Montgomery County
Mt Gilead	8/18/2000	Several trees and large limbs down on Pekin Rd.
Candor	12/17/2000	Trees were blown down.
Star	9/20/2001	Several large trees were reported down around Star.
Troy	5/13/2002	Trees were blown down in and north of Troy.
Uwharie	2/22/2003	Trees were blown down.
Mt Gilead	11/19/2003	Trees were blown down along Highway 73 from Mt. Gilead to Star, causing power outages.
Mt Gilead	7/11/2004	Trees were blown down.
Mt Gilead	6/7/2005	Trees and power lines were blown down near NC 731.
Troy	4/3/2006	TREES DOWN ON OKEEWENEE ROAD.
Troy	8/30/2006	Tree reported down near Woodrun at Cresswell Drive.
Troy	8/30/2006	Trre reported down near Ant Queen Road in northern portion of county.
Troy	11/16/2006	Trees down on power lines near Troy.
Troy	11/16/2006	Trees down south of Troy on HWY 134.
Troy	3/2/2007	One tree and large tree limb down. The tree limb broke through the window of a police car.
Troy	6/11/2007	Law enforcement reported trees and power lines down along Eldorado Road and Billhen Road.
Eldorado	6/24/2007	Several trees were reported blown down near Badin Lake.
Mt Gilead	7/7/2007	Numerous trees were blown down in Mount Gilead. The downed trees blocked roads on North School Street, South School Street and Julius Chambers Boulevard.
Mt Gilead	7/7/2007	Several business signs were blown down in Mount Gilead.
Chip	8/21/2007	One tree was blown down on Pekin Road near Candor.
Biscoe	3/4/2008	A few trees were blown down in Biscoe, blocking traffic along NC Highway 24.
Biscoe	3/4/2008	A few trees were reported blown down in Biscoe. The fallen trees blocked east bound lanes on NC Highway 24-27.
Pekin	3/4/2008	Numerous trees were reported blown down near Town Creek Indian Mound State Park.

Location	Date	Description
Mt Gilead	3/15/2008	A few trees were blown down near Mt. Gilead.
Pee Dee	7/8/2008	Several trees were blown down at the intersection of CC Camp Road and Pee Dee Road.
Okeewemee	7/8/2008	Trees were blown down onto power-lines on Floyd Farm Road.
Allreds	7/8/2008	Two trees were blocking traffic in the northbound lane of NC Highway 134.
Dry Creek	7/9/2008	One tree was blown down across Graham Road south of Candor.
Troy	7/22/2008	One tree was blown down across Bell Street.
Troy	7/13/2009	One tree was blown down on East Clairmont Avenue in Troy.
Emery	7/13/2009	One tree was blown down on South Clark Street in Candor.
Mt Gilead	7/13/2009	One tree was blown down on South Main Street in Mt. Gilead.
Candor	7/13/2009	Several trees were blown down on South Main Street in Candor.
Tuckertown	7/13/2009	Trees were blown down on 4th Avenue and Blaine Road.
Eldorado	7/27/2009	Numerous trees were blown down and blocking roads around Badin Lake.
Mt Gilead	8/5/2009	Numerous trees and power lines were reported in the Mt. Gilead area.
Mt Gilead	8/5/2009	One tree was reported down near the intersection of South Wadesboro Boulevard and 1st Street.
Eldorado	8/22/2009	One tree was reported down across North Carolina Highway 109.
Abner	8/22/2009	One tree was reported down across North Carolina Highway 134.
Moratock	6/6/2010	Several trees were blown down and large limbs reported broken off trees from the campground at Morrow Mountain State Park west of Troy to the Montgomery Country Club located just northeast of Troy.
Troy	6/14/2010	Numerous trees were blown down blocking several roads in and around Troy as well as across Montgomery County. Numerous water rescues were performed on Badin Lake due to the high wind capsizing boats.
Pee Dee	6/29/2010	Trees were reported down on Pee Dee Road.
Candor	7/9/2010	Scattered trees were blown down in the county with a few reports of downed trees in the Candor Community.
Star	7/25/2010	Numerous trees were blown down in the Star area. One Star resident incurred major property damage when several trees fell onto a pontoon boat and truck.
Uwharie	12/1/2010	Several trees were blown down along Highway 109.
Coggins Mine	6/11/2011	A tree was blown down on Blaine Road near Badin Lake. A boater on Badin Lake also requested assistance due to strong winds.
Troy	6/21/2011	Tree were blown down on Warner and Mccallum road. A tree was also blown down on First Street near Biscoe.
Mt Gilead	7/4/2011	One tree was blown down on an unoccupied house on Highland Avenue. No damage was reported.
Coggins Mine	7/4/2011	Three trees were blown down along Lower Bridge Water Road.
Mt Gilead	7/21/2011	One tree was blown down on Gaddy Farm Road.
Pekin	7/21/2011	One tree was blown down on Town Creek Mount Road near the historic site.
Tuckertown	8/6/2011	One tree was blown down on Moonshine Drive.
Star	8/8/2011	Numerous trees were blown down throughout the county with Star and Troy suffering the most damage, including down trees on Biscoe and Pekin Roads.
Mt Gilead	7/9/2012	Two trees were blown down in the vicinity of Mt. Gilead.

Location	Date	Description
Pekin	7/23/2012	Multiple trees were reported down near Pekin Road and North Carolina Highway 731.
Wadeville	7/24/2012	Multiple trees were reported down in and around the Troy area.
Okeewemee	7/28/2012	Local golf course reported approximately 60 hardwood trees were snapped on property. Several other trees were also blown down in the area.
Troy	9/1/2012	A park ranger reported several down trees on a hiking trail in Uwharrie National Forest.
Troy	1/30/2013	Multiple trees were blown down in Troy.
Pee Dee	6/13/2013	Trees and power-lines were blown down all across the county resulting in extensive wind damage throughout the county. The town of Troy was one of the hardest hit areas with numerous downed trees on homes.
Troy	7/2/2013	Several trees, a fence and a shed were reported blown down.
Moratock	1/11/2014	Multiple trees and a few power-lines were blown down throughout the county.
Biscoe	2/21/2014	A couple of trees were blown down across the road on NC 24 27 near the county line.
Steeds	6/9/2014	A couple of trees were blown down a few miles northeast of Steeds.
Troy	9/16/2014	Several trees were blown down along a swath from Troy To Biscoe.
Candor	6/2/2015	A couple of trees were blown down around Candor.
Hydro	6/2/2015	Two trees were blown down on Lilly's Bridge Road in Mt. Gilead.
Steeds	6/26/2015	A couple of trees were blown down along a swath from near Steeds to a few miles northeast of Star.
Mt Gilead	2/24/2016	A couple of trees were blown down along a swath from Mount Gilead to Troy.
Emery	6/29/2016	Numerous trees blown down along NC Highway 220 approximately 3 miles se of Troy.
Troy	8/27/2016	Power lines were reported down near Montgomery Memorial Hospital.
Star	8/27/2016	Power lines were reported down.
Capelsie	5/5/2017	One tree was blown down on Freeman Electric Road.
Tuckertown	5/5/2017	One tree was reported down on 5th Avenue.
Ophir	5/5/2017	One tree was reported down on Flint Hill Road.
Star Mtgomery Co Arp	5/5/2017	Two trees were reported down on Cotton Creek Road.
Wadeville	5/24/2017	One tree was blown down along NC Highway 24/27.
Troy	5/24/2017	One tree was blown down along NC Highway 24/27.
Troy	5/24/2017	One tree was blown down on Dairy Road.
Biscoe	4/15/2018	Several trees and power lines were blown down near Biscoe.
Tuckertown	4/15/2018	Trees and power lines were blown down near Badin Lake.
Candor	6/25/2018	One tree was reported down along Highway 211 near the Moore County Line.
Troy	6/25/2018	One tree was reported down on Reynolds Street, near Hickory Street.
Wadeville	6/27/2018	One tree was reported down on Deberry Road.
Wadeville	6/27/2018	One tree was reported down on Homanit Usa Road near North Carolina Highway 109.
Moratock	6/27/2018	One tree was reported down on Morton Road, near highway 109.
Mt Gilead	6/27/2018	One tree was reported down on North Carolina Highway 109 in Mount Gilead.

Location	Date	Description
Wadeville	6/27/2018	Several trees were reported down onto power lines along Yank Road.
Biscoe	7/6/2018	Multiple trees were reported down across the county.
Candor	7/6/2018	One tree was reported down on the road.
Capelsie	9/10/2018	One tree was reported down in the 1800 block of Hicks Road.
Biscoe	9/10/2018	One tree was reported down on Pine Street.
Tuckertown	9/27/2018	Five trees were reported down on Lake Forest Drive north of Badin Lake.
Uwharie	5/4/2019	One tree was reported down at North Carolina Highway 109 at Ophir Road.
Wadeville	6/20/2019	Numerous trees and power lines were reported down.
Candor	6/20/2019	Numerous trees and power lines were reported down.
Biscoe	7/4/2019	Multiple trees were blown down onto power lines near Biscoe.
Mt Gilead	8/20/2019	One tree was reported down on Hydro Road.
Mt Gilead	8/20/2019	One tree was reported near Highway 109 and McKay Hill Road.
Queen	4/13/2020	Numerous trees were reported down across the northwestern portion of Montgomery County.
Troy	4/13/2020	Several trees were reported down near North Carolina Highway 109.
Pee Dee	5/22/2020	One tree was reported down on Emerald Shores Road and Lillys Bridge Road.
Moratock	5/22/2020	One tree was reported down on Holiday Drive and River Road.
		Richmond County
Rockingham	6/26/2000	Trees down on north side of Rockingham.
Countywide	8/18/2000	Numerous trees down across the county.
Rockingham	12/17/2000	Trees fell onto power lines, causing power outages.
Hamlet	4/1/2001	Several trees downed.
Ellerbe	6/22/2001	A tin roof was blown off a building.
Steen Town	3/16/2002	Trees were blown down and outbuildings were damaged from the intersection of Old Peggymill Road and Colesville Road to the Scotland County line.
Rockingham	5/13/2002	Trees and power lines were blown down along Washington Street.
Roberdel	7/3/2002	Trees were blown down.
Ellerbe	11/11/2002	Trees were blown down just north of Ellerbe.
Countywide	5/2/2003	Trees were blown down countywide.
Rockingham	5/2/2004	5 trees were blown down, blocking several roads.
Rockingham	6/23/2004	Trees were blown down along Osbourn Road near Highway 1.
Ellerbe	7/10/2004	Trees were blown down along NC Highway 73 and several nearby roads in the northern part of the county.
Ellerbe	3/8/2005	Trees were blown down in Ellerbe, and at scattered other locations across the county. The Richmond County AWOS reported a measured gust of 64 mph.
Rockingham	5/26/2006	TREES DOWN IN PHILADELPHIA.
Ellerbe	6/23/2006	Reports of trees down north and west of the main Post Office downtown.
Rockingham	7/15/2006	Power lines down.
Rockingham	7/15/2006	Trees down along US HWY 1. Fire department and county DOT dispatched to remove trees from roadway.
Hamlet	7/19/2006	Trees down on Airport and Corning Road.
Rockingham	7/19/2006	Trees down.

Location	Date	Description
Ellerbe	7/28/2006	Numerous trees down around Ellerbe. HWY 220 and 73 were blocked by fallen trees over an hour.
Rockingham	9/28/2006	Trees down on Perry Leviner Road.
Mangum	6/13/2007	Several trees were blown down blocking several roads in the Grassy Island area near Blewett Falls Lake.
Plainview	4/4/2008	Trees were blown down between Ellerbe and Norman on Capel Mill Road.
Hoffman	6/1/2008	Straight line winds blew a tree down onto a power line in Hoffman, causing power outages.
Longwood Park	7/6/2008	Power lines were blown down at the intersection of Wiregrass Road and East Washington Street Extension.
Osborne	7/8/2008	One tree was blown down at the intersection of Airport Road and Ghio Road.
Osborne	7/8/2008	One tree was blown down at the intersection of Battley Dairy Road and Hatcher Road. Another tree was blown down near the intersection of Ghio and Airport Road.
Plainview	7/8/2008	Three trees were blown down at the intersection of Larry Parsons Road and Clayton Carriker Road.
Rockingham	7/9/2008	Several trees were blown down across central western portions of the county.
Hoffman	7/31/2008	One tree was blown down across McDonald Church Road.
Hoffman	7/31/2008	One tree was blown down in the town of Hoffman.
Ellerbe	7/16/2009	Numerous trees were reported down across Ellerbe, North Carolina.
Ellerbe	7/16/2009	One tree was reported down at the intersection of United States Highway 220 and North Carolina Highway 73.
Ellerbe	8/11/2009	One tree was reported blown down on Haywood Cemetery Road.
Rockingham Hamlet Ar	6/14/2010	A couple of trees were blown down in East Rockingham.
Covington	6/15/2010	Trees and power lines were reported down along Interstate 73.
Roberdel	6/29/2010	Large tree limbs were reported down at Old Salem Road and Ellington Avenue.
Knob Hill	6/29/2010	Numerous trees and power lines were reported down across the city of Rockingham, NC.
Roberdel	6/29/2010	One tree was reported down on Nicholson Road and Roberdel Road.
East Rockingham	7/16/2010	Two trees were blown down in East Rockingham.
East Rockingham	12/1/2010	One large tree was blown down on State Route 1939 in east Rockingham.
Knob Hill	4/28/2011	One tree was reported down across Hawthorne Avenue.
Knob Hill	4/28/2011	One tree was reported down on a detached garage near Rockingham, North Carolina.
Rockingham	4/28/2011	One tree was reported down on Caroline Street.
Rockingham	4/28/2011	Several large oak trees were reported down across Covington Street.
Knob Hill	4/28/2011	Several trees were reported down across Richmond Road in the Richmond Park community.
Rockingham	4/28/2011	Several trees were reported down across Rockingham Road.
Rockingham	4/28/2011	Several trees were reported down on Broad Avenue.
Rockingham	4/28/2011	Several trees were reported down on Bryan Street.
Everetts Mill	6/12/2011	Several trees were blown down along a swath from Highway 1 near Everetts Mill to a few miles southwest of Hamlet.

Location	Date	Description
Knob Hill	6/18/2011	Several trees were blown down along the swath east of Rockingham.
Ellerbe	6/21/2011	Numerous trees and power-lines down along the swath, including down trees on Mill Road, East Washington Street, Skyline Drive, and Ardsley Road.
Hamlet	7/22/2011	Two large oak trees were uprooted, damaging a house and fence. Monetary damages were estimated.
Rockingham	8/21/2011	Several large bushes were blown down and were blocking the southbound lane of US 1.
Ellerbe	8/21/2011	Several large limbs were blown down a couple miles northeast of Ellerbe.
Ellerbe	8/21/2011	Several trees were blown down along a swath from near Ellerbe to Rockingham.
Mangum	8/29/2011	A couple of trees and power-lines were blown down along Grassy Island Road.
(Hff)Mackell Aaf Hof	12/7/2011	KHFF gusted to 58 mph.
Roberdel	5/22/2012	Four trees were reported down in the Roberdell area of Rockingham.
Roberdel	6/22/2012	Trees and power-lines were blown near the intersection of Dockery Road and Cartledge Creek Road.
Ellerbe	7/5/2012	Numerous larger Oak tree branches were reported down across Carthage Creek Road.
Covington	7/5/2012	One tree was reported down across the intersection of North Carolina Highway 73 and Tedder Road.
Rockingham	7/9/2012	Power-lines were reported down on Yates Hill Road.
Diggs	7/24/2012	Several trees were reported down at the intersection of Sandhill Road and Osborne Road.
Steen Town	7/24/2012	Two large trees were reported down, with one on a house near Hamlet.
Roberdel	7/24/2012	Two trees were reported down across United States Highway 220 near Sandy Ridge Church Road.
Norman	8/15/2012	Large tree limbs were reported blown down near Clayton Carriker Road.
Osborne	1/30/2013	A roof was partially blown off of a single story retail shop building. The monetary damage was estimated.
Knob Hill	6/13/2013	Numerous trees and power-lines were blown down across the county.
Rockingham	6/26/2013	One tree was blown down onto a house in Rockingham. Monetary damage was estimated. In addition, power lines were blown down in Hamlet.
Hamlet	6/27/2013	One tree was blown down near the intersection of Entwistle Street and SR1439.
Lewarae	7/17/2013	One tree was reported down along United States Highway 74 at the intersection of Business 74.
Mangum	2/21/2014	Approximately 5 trees were blown down near the Mangum area near Highway 109 and Jack Currie Road.
East Rockingham	6/17/2014	Trees and power-lines were blown down near the intersection of Mill Road and Hannah Pickett Avenue.
Steen Town	6/19/2014	Trees and powerlines were reported down along NC Highway 381.
Roberdel	6/18/2015	One tree was blown down and was blocking both lanes of McNeil Road north of Rockingham.
Ellerbe	6/26/2015	One tree was blown down on Highway 73 in Ellerbe.
Ellerbe	6/30/2015	One tree was blown down near John Webb Road and Page Street Extension.
Derby	7/8/2015	A tree was blown down on Sycamore Lane. A vehicle struck the tree in the road and the driver sustained minor injuries.

Location	Date	Description
Ellerbe	7/7/2016	Multiple trees were blown down along a swath from Ellerbe to three miles east- northeast of Ellerbe. Power lines were also blown down near the intersection of Green Lake Road and Hayward Parker Road.
(Hff)Mackell Aaf Hof	7/8/2016	Remnants of an upstream MCS tracked across the area during peak heating and interact with a hot unstable moist air mass, with seasonably strong mid level flow and steep mid level lapse rates. This allowed for scattered to numerous storms to develop across the area, with widespread severe weather.
Hamlet	7/16/2016	One tree was reported down in Hamlet.
Longwood Park	7/16/2016	One tree was reported down on State Route 177 South.
Roberdel	4/3/2017	A mobile home was overturned and a large tree was blown down by thunderstorm winds. No one was in the home at the time.
Ellerbe	5/25/2017	One tree was blown on John Webb Road, near the intersection of Sandy Ridge Church Road.
Roberdel	7/5/2017	A couple of trees were blown down at NC Highway 220 and Crestview Drive.
Ellerbe	7/5/2017	A couple of trees were blown down.
East Rockingham	7/23/2017	Multiple trees were blown down along a swath from Rockingham to Hamlet.
West Rockingham	7/23/2017	Two trees were blown down near the 2900 block of US 220 North in Ellerbe.
Ellerbe	9/1/2017	One tree was blown down in Ellerbe.
Plainview	6/25/2018	One tree was reported down near Highway 73.
Covington	6/25/2018	One tree was reported down on Cartledge Creek Road.
Ellerbe	7/21/2018	A power-line was reported down across Page Street.
Rockingham	8/8/2018	Trees were reported down on power-line in downtown Rockingham.
(Hff)Mackell Aaf Hof	2/12/2019	A couple of trees were reported down along United States Highway 1 in the northern half of Richmond County.
Ellerbe	4/19/2019	Multiple trees reported down in Ellerbe.
West Rockingham	5/4/2019	One tree was reported down along Yates Hill Road.
Hamlet	6/22/2019	A tree and power lines were reported down on 4th Street.
Diggs	6/22/2019	Trees and power poles were reported down at United States Highway 1 and Saint Stephens Church Road.
Knob Hill	6/22/2019	Trees were reported down at Aslington Street and Hamer Road.
Marston	7/4/2019	Two trees were blown down, one on Millstone Road and the other on McDonald Church Road near Hoffman. A third tree was blown down from sub-severe outflow winds along Second Street in Rockingham.
Steen Town	7/22/2019	A few trees reported down in the area.
(Hff)Mackell Aaf Hof	4/13/2020	Severe wind gust measured at Mackall Army Air Field station.
Lewarae	4/13/2020	Trees and power lines were reported down through the county, including in Rockingham where a structure collapsed.
Derby	6/22/2020	One tree was reported down along Derby Road near Sycamore Lane.
Ellerbe	6/22/2020	One tree was reported down near Ellerbe along Highway 73.
Ellerbe	6/22/2020	One tree was reported down on Bennett Road.
Scotland County		

Location	Date	Description
Countywide	4/1/2001	Trees downed across the county.
Laurinburg	6/22/2001	Trees and telephone poles were blown down.
Countywide	3/16/2002	Old Wire Road, McFarland Road, and Scotch Grove Road were blocked by fallen trees. At Hwy 501 and Scotch Grove Road, three homes were damaged and several agricultural buildings and vehicles were destroyed. Several mobile homes were blown off their foundations and damaged by fallen trees near Wagram.
Laurel Hill	8/19/2002	Trees and power lines were blown down on the south side of Laurel Hill.
Wagram	7/10/2004	Trees were blown down near Shaw Middle School.
Laurinburg	3/8/2005	Numerous trees were blown down near Highway 401 north of Laurinburg and on Turnpike Road. Trees fell on a couple of houses on Anita Drive in town, and trees fell on cars in the parking lot of Scotland Memorial's medical facilities. A 100-year-old barn on Peabridge Road was destroyed.
Laurinburg	6/21/2006	57 mph wind gust measured at Maxton Laurinburg Airport.
Wagram	6/21/2006	Trees blown down.
Laurel Hill	7/15/2006	Several trees down.
Gibson	7/15/2006	Several trees down.
Countywide	9/28/2006	Trees down county wide.
Laurinburg	6/4/2007	In Laurinburg damaging winds in excess of 60 mph knocked down numerous trees blocking several roads. One tree that fell crushed several cars at a Laurinburg auto repair shop.
Gibson	6/26/2007	A trained spotter reported roof and structural damage to a home and other buildings near Gibson.
Gibson	6/26/2007	Gibson Fire Department reported several trees and power lines down. One tree fell on a house on St. Johns Church Road.
Laurinburg	6/26/2007	Laurinburg Fire Department reported multiple trees down on Purcell Road.
Laurinburg	6/26/2007	Several trees were blown down on Silverhill Road.
Laurinburg	3/4/2008	Numerous trees were reported blown down across Laurinburg. Several power lines were also blown down, including in the Laurel Hill area, where a tree fell onto power lines and a tractor trailer.
Laurinburg	3/4/2008	Several trees were reported blown down in and around Laurinburg.
Sneads Grove	3/15/2008	One tree was blown down near Sneadtown Road.
Laurinburg	6/11/2008	Numerous trees were blown down across the Laurinburg area. Some of the trees fell down onto power lines, resulting in widespread power outages.
Laurinburg	6/11/2008	Scotland County 911 reported that power lines and oak trees were downed all across the southern portion of the county.
Wagram	7/8/2008	One tree was blown down across Old Wire Road.
Laurinburg	7/30/2008	Numerous power-lines were blown down in the city limits.
Laurel Hill	7/30/2008	One tree was blown down on Old Rockingham Road near St. Johns Church Road.
Laurel Hill	8/2/2008	A large severe thunderstorm knocked down numerous trees and power lines in a corridor from Laurel Hill to just northeast of Laurinburg. Several roads in Laurel Hill were impassable. A tree was also reported down on Highway 401 between Laurinburg and Wagram.
Old Hundred	8/2/2008	Several trees were blown down to the northwest of Laurinburg.
Sneads Grove	8/10/2008	A tree was reported down on Highway 501 north of Laurinburg.

Location	Date	Description
Wagram	5/2/2009	Wind blew down several trees which brought down power lines and damaged one vehicle. One person sustained minor injuries in the vehicle.
Hasty	5/11/2009	A microburst began just west of Scotch Meadows Country Club near Fairway Drive and continued east for almost 2 miles before dissipating at Hasty Road. The microburt knocked down numerous trees which resulted in minor structural damage to 3 homes east of the Country Club. As the microburst progressed east it also destroyed 2 barns at a horse farm.
Oak Hill	6/1/2009	Downed trees were blocking traffic on Highway 15-501 between Carpenter Road and Peach Carpenter Road.
Gibson	7/31/2009	Numerous trees were blown down in the Gibson area.
Laurel Hill	7/31/2009	Numerous trees were blown down in the Laurel Hill area.
Scotch Grove	5/31/2010	One tree was reported down across United States Highway 401 between Wagram, NC and Laurinburg, NC.
Gibson	5/31/2010	One tree was reported down near the intersection of McGregor Road and Old Stage Road.
Gibson	6/15/2010	Power lines blown down along Fletcher Road between Dunc Road and Old Stage Road. Trees were also blown down just outside of Wagram as well as along Highway 401 between Academy Road and Turnpike Road.
Crossway	7/8/2010	Several trees were blown down along and across Blue Farm Road near X-Way Road.
Oak Hill	4/28/2011	KHFF reported a wind gust to 52 knots.
Crossway	4/28/2011	Several trees were reported down on Blues Farm Road.
Hasty	4/28/2011	Several trees were reported down on Pea Bridge Road.
Laurinburg	6/12/2011	A tree was blown down a few miles northwest of Wagram. Also, a large tree limb fell on a power pole causing a fire near East Laurinburg. This caused the power to go out in the area.
Laurinburg	6/22/2011	Multiple trees were blown down across the Laurinburg area.
Laurel Hill	6/22/2011	Multiple trees were blown down along a swath from just southwest of Laurel Hill to just northeast of Laurel Hill.
Crossway	6/23/2011	Several trees were blown down along a swath from several miles southwest of Laurinburg to the city of East Laurinburg.
Scotch Grove	7/6/2011	Numerous trees and power-lines were blown down throughout the county. One tree fell onto a vehicle, trapping passengers. No injuries were reported. Monetary damages were estimated.
Oak Hill	7/13/2011	Six trees were reported down near Camp Mackall.
Sneads Grove	8/21/2011	A couple of trees were blown down along a swath from near Laurel Hill to near Laurinburg.
Elmore	9/30/2011	A couple of trees were blown down along a swath from near Laurel Hill to near Wagram.
Sneads Grove	5/14/2012	One tree was reported down blocking Old Wire Road near United States Highway 501.
Laurel Hill	5/14/2012	One tree was reported down near Old Wire Road and Crest Mill Road.
East Laurinburg	6/23/2012	Peak thunderstorm wind gust was measured at 51 knots at the KMEB ASOS.
Sneads Grove	6/13/2013	A tree along with some power lines were blown down.
Springfield	6/13/2013	Numerous trees were blown down in Laurinburg and Wagram.
Springfield	7/17/2013	Trees were reported down on power lines.

Location	Date	Description
Sneads	6/26/2015	One tree was blown down and was blocking the road on Sneadtown Road near
Grove	6/26/2015	Silver Hill Road.
Wagram	6/26/2015	Power lines were blown down on Highway 401 N near Wagram.
Crossway	6/30/2015	One tree was blown down across X-Way Road.
Laurinburg	6/5/2016	Trees were reported down in East Laurinburg.
Wagram	6/5/2016	Trees were reported down near the Scotland Hoke county line.
Springfield	6/5/2016	Trees were reported down on Old Stage Road near Highway 79.
Wagram	6/5/2016	Trees were reported down on Riverton Road, south of Wagram.
Sneads Grove	7/11/2016	A couple of trees were reported down near the intersection of Marston Road and Gum Swamp Lake Road.
Old Hundred	7/11/2016	One tree was reported down on Peele Chapel Road.
Old Hundred	7/23/2017	Multiple trees were blown down throughout Scotland County.
Elmore	4/15/2018	One tree was blown down on Lauren Hill Church Road near Laurel Hill.
Sneads	6/1/2018	One tree was blown down on Old Wire Road near Aberdeen Road in Laurel Hill.
Grove		Numerous trees and power lines were reported down across the city of
Crossway	6/24/2018	Laurinburg, especially south of Highway 74.
Scotch Grove	9/17/2018	Several trees blown down north of Laurinburg.
Green Pond	4/19/2019	Thunderstorm winds downed several trees across the county.
Hasty	6/20/2019	Two large trees were reported down.
Springfield	6/22/2019	Multiple trees and power lines were reported down on Old Wire Road, Rockingham Road and Old Stage Road.
Laurinburg	7/19/2019	One tree was blown down across the street from the Laurinburg Fire Department.
Laurel Hill	7/19/2019	Several trees were blown down along Henry Gibson Road, Smith Road and Tobacco Road.
Green Pond	7/19/2019	Several trees were blown down along Walters Road near the intersection with Frances Road.
Oak Hill	1/11/2020	One tree was reported down on Nashville Church Road.
Ohio	1/11/2020	One tree was reported down on Tabernacle Road.
Springfield	2/6/2020	Several trees were reported down across southern portions of the county.
East Laurinburg	4/13/2020	Severe wind gust measured at the Laurinburg-Maxton Airport.
Elmore	5/22/2020	One tree fell onto power lines.
Laurel Hill	5/22/2020	One tree was reported down on a house along Springs Mill Road.
East Laurinburg	5/22/2020	One tree was reported down on a house on Lee��s Mill Road.
East Laurinburg	5/22/2020	One tree was reported down on a house on Lee��ï Mill Road.
Laurinburg	5/22/2020	One tree was reported down on a house on Midland Way.
Laurinburg	5/22/2020	One tree was reported down on Azure Court.
East Laurinburg	5/22/2020	One tree was reported down on Interstate Highway 72.

TABLE H.5: TORNADO (2000-2020)

Location	Date	Scale	Description	
Anson County				
Wadesboro	5/31/2003	F0	Trees and powerlines were blown down along highway 742, and there were several reports of a tornado sighting in the area.	
Morven	9/7/2004	F1	A tornado touched down just northeast of Morven along Highway 145. Trees and power lines were blown down along the road and two turkey barns were destroyed, with thousands of turkeys killed. The damage was generally contained to an area off Highway 145, Diggs Road and Old NC 85.	
Mc Farlan	4/13/2020	EF1	An EF-1 tornado with maximum winds of 110 mph touched down approximately 5 miles south of the initial tornado. While not continuous, the tornado caused a well defined path of extensive tree damage through heavily wooded areas beginning near McClendon Road and continued northeast for approximately 9 miles, before finally dissipating near Pitt Road. Downed trees damaged numerous homes, of which at least 6 to 7 homes were destroyed. Numerous outbuildings and vehicles were also severely damaged or destroyed. Several turkey houses in the area also sustained significant damage.	
Morven	4/13/2020	EF2	An EF-2 tornado with maximum winds of 125 mph briefly touched down along Diggs Road, just north of North Carolina Highway 145, one mile northeast of Morven. The tornado destroyed 2 of 4 chicken houses at this location. The tornado also lifted a mobile home from its foundation and rotated the home 180 degrees.	
			Montgomery County	
Star	9/27/2004	FO	A tornado touched down in Star. A tree was blown down onto a home, and several outbuildings were destroyed at that same residence. At another residence, a large 100-year-old barn was moved about two feet off its foundation, a large chicken coop was destroyed. Siding and structural damage was sustained to the house, and the chimney was blown off. Several trees were snapped or uprooted along the tornado's path.	
			Richmond County	
Plainview	9/27/2004	FO	A tornado touched down briefly in far northeast Richmond County, along Jones Spring Church Road and State Road 1458, blowing down trees and power lines.	
Diggs	5/14/2012	EF1	At approximately 12:55 pm a weak and very brief tornado touched down in a forested area about 8.5 miles southwest of Rockingham and produced a small area of tree damage which included uprooted and snapped pine trees. The next area of damage along the discontinuous damage path was about one-tenth of a mile to the northeast of the first touchdown. Much of the damage in this area was minor and included roof covering and shingle damage and broken tree limbs. There was a small area of enhanced damage that included numerous snapped and downed trees, a carport that was lifted and tossed approximately 250 yards, a small tin and aluminum framed garage that was leveled and significant damage to the roof of a single story home, with a loss of approximately 30 percent of its roof. Numerous windows were also broken and the vinyl siding on one side of the home was completely stripped. This damage was consistent with wind speeds of approximately 90 mph. The width of the damage path was approximately 100 yards at this location. The tornado then appeared to lift and the final touchdown and notable damage area was located approximately 6.8 miles	

Location	Date	Scale	Description
			south-southwest of Rockingham. Damage in this area included a significant swath of downed and snapped pine trees. The tornado then lifted at approximately 12:58 pm. In addition to the brief tornado touch down along the 2 mile path, there was some minor straight-line wind damage along or near the path.
			Scotland County
Old Hundred	8/12/2004	F1	A tornado touched down near Old Hundred and traveled northeast to Silver Hill. Trees were blown down in Old Hundred, and damage was sustained to a shed roof and to the ceiling and roof of the school bus garage at a Scotland County Schools department of transportation site on McFarland Road. A mobile home was shifted off its foundation near Sneads Grove. Trees and power lines were blown down in Silver Hill.
Laurinburg	8/29/2004	F0	A tornado touched down just south of Laurinburg. Part of a roof was blown off of a house, and shingles were torn off of several other homes. Several pine trees were snapped.

TABLE H.6: WINTER WEATHER (2000-2020)

Date	Description	
Anson County		
1/18/2000	Light snow moved over the Triad area in the early morning hours of the 18th and spread slowly east-southeast, reaching the Sandhills and Coastal Plain before daybreak. The snow intensified in the morning in the Triad area where 4 to 6 inches of snow fell. The Sandhills and Coastal Plain received 1 to 3 inches before changing over to sleet and freezing rain in the mid-morning hours. Total accumulations of ice were less than a quarter of an inch. The snow and ice made for slick road conditions across the entire area. Most counties reported numerous accidents, causing many major roads to close.	
1/22/2000	A winter storm producing snow and ice moved from west to east across central North Carolina beginning on the evening of the 22nd. The storm produced 2 to 5 inches of snow across the western Piedmont where Stanly and Anson counties reported 4 to 5 inches and the Triad around 2 inches. Amounts less than an inch covered the ground in the Triangle and Rocky Mount areas while the southern tier counties got 1 to 3 inches.	
1/24/2000	This record-setting snow storm began with freezing drizzle in the early morning hours of the 24th. Road surfaces quickly froze during this time when the temperature dropped from 32 degrees to 27 degrees. Numerous traffic accidents were reported. By mid-morning, additional precipitation was advancing northward into the southern portions of central North Carolina.	
1/28/2000	Sleet and freezing rain began to fall in the western Piedmont of North Carolina on the evening of the 28th. The ice accumulated to a half inch in some locations near the Triad area and along the Virginia border, with most locations in the area receiving around a quarter of an inch of ice. The rest of central North Carolina received a thin coating of less than a quarter inch, creating patchy spots of ice on roads and causing downed trees and power lines. Approximately 30,000 people were without power across the state at the peak of the storm. In eastern portions of the Sandhills and in the Coastal Plain, the freezing rain changed to light rain, preventing more widespread icing in that area. A lull in the precipitation from the predawn hours on Sunday until Sunday morning also kept ice accumulation minimal.	
1/3/2002	The first winter storm of the season brought significant snowfall to central North Carolina. An initial round of snow began to fall during the evening of the 2nd. The snow was heavy at times, and accumulated between 3 and 5 inches. The snow changed to sleet and light freezing rain in the Coastal Plain through the early morning hours of the 3rd. After a period of little or no precipitation	

Date	Description
	on the morning of the 3rd, snow began to fall again across the entire area, and was heavy at times, adding an additional 4 to 8 inches. Storm total snowfall amounts were over a foot from the Sandhills northeast across the Piedmont to the Virginia border. The Northwest Piedmont, including the Triad area, received 6 to 10 inches. Snowfall amounts were lower in the Southern and Central Coastal Plain, between 4 and 8 inches, due to the snow mixing with sleet and freezing rain.
12/4/2002	One of the worst ice storms to ever hit Central North Carolina began in the late afternoon on December 4, and ended in the early morning hours of December 5. Precipitation mainly began as a mix of snow and sleet, then turned to freezing rain. A quarter inch of ice or more covered locations mainly to the west of I-95. The highest precipitation amounts stretched across the Piedmont, from Albemarle to Asheboro to Durham to Warrenton, where a half inch to one inch thick layer of ice was reported. 1 to 2 inches of snow also fell in the Triad area and in the counties bordering Virginia with trace amounts elsewhere. Large trees and power lines were downed by the ice all across the area. The storm caused a record number of power outages, as nearly one million people lost power in Central North Carolina, some for nearly a week.
2/16/2003	Sleet and freezing rain fell across much of central North Carolina. Sleet accumulated between 1 and 3 inches across the Piedmont, mainly west of a line from Southern Pines to Raleigh to Roanoke Rapids. The highest accumulations were near the Virginia border and in the Triad area. Mainly freezing rain fell across the Sandhills and Coastal Plain, with ice accumulations around a quarter inch along a narrow corridor from Wadesboro to Smithfield to Rocky Mount.
1/26/2004	A winter storm occurred on January 25th and 26th when snow and sleet fell across central North Carolina. The precipitation fell as snow and sleet over much of the area on the 25th, then became freezing rain over the southeastern sections on the 26th. 3 to 6 inches of snow and sleet fell over the Piedmont on the 25th, with as much as 1/4 inch of freezing rain reported in the southern coastal plain on the 26th.
2/26/2004	A strong storm arrived on February 26th and continued into the morning of the 27th. This storm hit the area with a one-two punch, affecting southern sections on the 26th, then northern sections late on the 26th and the 27th. The first punch dumped heavy snow over portions of the southern Piedmont and Sandhills. Accumulations totaled 6 to locally 10 inches in areas such as Laurinburg, Hamlet, Fayetteville, and Raeford. Much lighter amounts fell to the north during the day. The second punch arrived in western sections of the area late in the day and shifted northeast across central and eastern portions overnight. The heavy snow was accompanied by thunder and lightning across the western Piedmont. Snowfall amounts ranged between 12 to 18 inches from Albemarle northeast to Greensboro. Other sections of the Piedmont, including the Triangle, received between 3 and 6 inches.
2/1/2007	The combination of moisture streaming in from the south with cold air over Central North Carolina resulted in an early morning snow event for all of Central North Carolina. Up to 2 inches of snow fell over portions of the piedmont from Albemarle to Lexington and Asheboro. Most other locations picked up around an inch of snow. Even with so little snow, due to the cold ground and timing of the snow during the morning commute the impact on the area was significant.
1/17/2008	Between one to two inches of snow accumulated countywide mostly before daybreak.
1/19/2008	Around one half inche of snow accumulated during the afternoon and early evening hours.
1/20/2009	Between 4 to 5 inches of snow fell across the county over a 12 hour period. Roads were quickly covered with snow resulting in several traffic accidents and the closing of local schools and businesses.
2/4/2009	Between one to three inches of snow fell across the county.
1/29/2010	Up to a quarter of an inch of freezing rain fell across the county. The freezing rain mixed with the snow. Several automobile accidents were reported.
2/12/2010	Around five inches of snow fell across the entire county Friday night. Due to the storm striking at night and on a weekend impacts were limited with just a few vehicle accidents being reported.

Date	Description
12/16/2010	A prolonged period of light snow and freezing rain in the morning resulted a trace of snow and a trace of freezing rain. This combination created hazardous driving conditions during the morning commute.
12/25/2010	Five inches of snow fell countywide including in Wadesboro. Many roads were impassible due to the heavy snow, however, other than a few minor accidents no other problems were reported due to the holiday.
1/10/2011	Five to seven inches of snow fell across the area during the morning and afternoon hours. Snow changed over to freezing rain during the afternoon resulting in a glazing of ice on top of the snow. All area roads were covered in snow resulting in the closure of schools and businesses.
1/28/2014	Snowfall averaged 2 to 4 inches across the county.
2/11/2014	Snow averaged 1-2 inches across the county.
2/12/2014	Snow fall averaged 4-6 inches across the county. In addition, ice accrual averaged 2/10 of an inch.
2/16/2015	Snowfall amounts of around a trace fell across the county. However, a quarter of an inch of freezing rain accrual was reported.
2/24/2015	Snowfall amounts of a trace to 0.50 inches fell across the county.
1/22/2016	One quarter of an inch of freezing rain accrual was reported across the county.
1/7/2017	Snowfall amounts ranged from a dusting across southern portions of the county to near 1 inch across the north.
1/17/2018	Up to 1 inch of snow fell across the county.
2/20/2020	Snowfall amounts ranged from a trace across southern portions of the county to 1 inch across northern portions of the county.
	Montgomery County
1/18/2000	Light snow moved over the Triad area in the early morning hours of the 18th and sperad slowly east-southeast, reaching the Sandhills and Coastal Plain before daybreak. The snow intensified in the morning in the Triad area where 4 to 6 inches of snow fell. The Sandhills and Coastal Plain received 1 to 3 inches before changing over to sleet and freezing rain in the mid-morning hours. Total accumulations of ice were less than a quarter of an inch. The snow and ice made for slick road conditions across the entire area. Most counties reported numerous accidents, causing many major roads to close.
1/22/2000	A winter storm producing snow and ice moved from west to east across central North Carolina beginning on the evening of the 22nd. The storm produced 2 to 5 inches of snow across the western Piedmont where Stanly and Anson counties reported 4 to 5 inches and the Triad around 2 inches. Amounts less than an inch covered the ground in the Triangle and Rocky Mount areas while the southen tier counties got 1 to 3 inches.
1/24/2000	This record-setting snow storm began with freezing drizzle in the early morning hours of the 24th. Road surfaces quickly froze during this time when the temperature dropped from 32 degrees to 27 degrees. Numerous traffic accidents were reported. By mid-morning, additional precipitation was advancing northward into the southern portions of central North Carolina.
1/28/2000	Sleet and freezing rain began to fall in the wetsern Piedmont of North Carolina on the evening of the 28th. The ice accumulated to a half inch in some locations near the Triad area and along the Virginia border, with most locations in the area receiving around a quarter of an inch of ice. The rest of central North Carolina received a thin coating of less than a quarter inch, creating patchy spots of ice on roads and causing downed trees and power lines. Approximately 30,000 people were without power across the state at the peak of the storm. In eastern portions of the Sandhills and in the Coastal Plain, the freezing rain changed to light rain, preventing more widespread icing in that area. A lull in the precipitation from the predawn hours on Sunday until Sunday morning also kept ice accumulation minimal.
1/3/2002	The first winter storm of the season brought significant snowfall to central North Carolina. An initial round of snow began to fall during the evening of the 2nd. The snow was heavy at times, and

Date	Description
	accumulated between 3 and 5 inches. The snow changed to sleet and light freezing rain in the Coastal Plain through the early morning hours of the 3rd. After a period of little or no precipitation on the morning of the 3rd, snow began to fall again across the entire area, and was heavy at times, adding an additional 4 to 8 inches. Storm total snowfall amounts were over a foot from the Sandhills northeast across the Piedmont to the Virginia border. The Northwest Piedmont, including the Triad area, received 6 to 10 inches. Snowfall amounts were lower in the Southern and Central Coastal Plain, between 4 and 8 inches, due to the snow mixing with sleet and freezing rain.
12/4/2002	One of the worst ice storms to ever hit Central North Carolina began in the late afternoon on December 4, and ended in the early morning hours of December 5. Precipitation mainly began as a mix of snow and sleet, then turned to freezing rain. A quarter inch of ice or more covered locations mainly to the west of I-95. The highest precipitation amounts stretched across the Piedmont, from Albemarle to Asheboro to Durham to Warrenton, where a half inch to one inch thick layer of ice was reported. 1 to 2 inches of snow also fell in the Triad area and in the counties bordering Virginia with trace amounts elsewhere. Large trees and power lines were downed by the ice all across the area. The storm caused a record number of power outages, as nearly one million people lost power in Central North Carolina, some for nearly a week.
2/16/2003	Sleet and freezing rain fell across much of central North Carolina. Sleet accumulated between 1 and 3 inches across the Piedmont, mainly west of a line from Southern Pines to Raleigh to Roanoke Rapids. The highest accumulations were near the Virginia border and in the Triad area. Mainly freezing rain fell across the Sandhills and Coastal Plain, with ice accumulations around a quarter inch along a narrow corridor from Wadesboro to Smithfield to Rocky Mount.
1/26/2004	A winter storm occurred on January 25th and 26th when snow and sleet fell across central North Carolina. The precipitation fell as snow and sleet over much of the area on the 25th, then became freezing rain over the southeastern sections on the 26th. 3 to 6 inches of snow and sleet fell over the Piedmont on the 25th, with as much as 1/4 inch of freezing rain reported in the southern coastal plain on the 26th.
2/26/2004	A strong storm arrived on February 26th and continued into the morning of the 27th. This storm hit the area with a one-two punch, affecting southern sections on the 26th, then northern sections late on the 26th and the 27th. The first punch dumped heavy snow over portions of the southern Piedmont and Sandhills. Accumulations totaled 6 to locally 10 inches in areas such as Laurinburg, Hamlet, Fayetteville, and Raeford. Much lighter amounts fell to the north during the day. The second punch arrived in western sections of the area late in the day and shifted northeast across central and eastern portions overnight. The heavy snow was accompanied by thunder and lightning across the western Piedmont. Snowfall amounts ranged between 12 to 18 inches from Albemarle northeast to Greensboro. Other sections of the Piedmont, including the Triangle, received between 3 and 6 inches.
1/30/2005	A mix of snow and sleet moved across the Piedmont on Saturday afternoon. This brought a half inch of sleet to the Winston-Salem area. A lull in the precipitation was followed by a period of freezing rain Sunday morning. A quarter inch of ice accrued in the central and western Piedmont, which created icy roads and caused numerous accidents.
1/18/2007	Snow moved into Central North Carolina just prior to sunrise on January 18th impacting local schools and morning communiters. Between one to two inches of snow fell across the area resulting in numerous accidents. About eight children were injured in Asheboro when a school bus over turned and two indirect deaths were reported near Goldsboro as a result of a single vehicle accident. Snow changed over all rain by afternoon.
2/1/2007	The combination of moisture streaming in from the south with cold air over Central North Carolina resulted in an early morning snow event for all of Central North Carolina. Up to 2 inches of snow fell over portions of the piedmont from Albemarle to Lexington and Asheboro. Most other locations picked up around an inch of snow. Even with so little snow, due to the cold ground and timing of the snow during the morning commute the impact on the area was significant.

Date	Description	
1/17/2008	Between one to two inches of snow accumulated countywide mostly before daybreak.	
1/19/2008	Around one half inche of snow accumulated during the afternoon and early evening hours.	
1/19/2008	Between one to two inches of snow accumulated mainly during the late afternoon and early evening hours.	
1/20/2009	Between 3 to 4 inches of snow fell across the county over a 12 hour period. Roads were quickly covered with snow resulting in several traffic accidents and the closing of local schools and businesses.	
2/4/2009	Between one to three inches of snow fell countywide. Due to the warm ground temperatures snow melted rapidly of roads.	
3/2/2009	Between three to four inches of snow fell countywide. A few automobile accidents were reported the mornings following the storm due to the re-freezing of the melting snow overnight.	
1/29/2010	Between 2 to 4 inches of snow fell across the county in addition to a trace of freezing rain. Several vehicle accidents and a number of power outages were reported. Due to the cold temperatures icy road conditions persisted for several days resulting in the closure of schools and businesses.	
2/12/2010	Around three to five inches of snow fell across the entire county Friday night and early Saturday. Due to the storm striking at night and on a weekend impacts were limited with just a few vehicle accidents being reported.	
3/2/2010	Around 1 to 3 inches of snow fell across the county.	
12/16/2010	A prolonged period of light snow and freezing rain in the morning resulted a trace of snow and a trace of freezing rain. This combination created hazardous driving conditions during the morning commute.	
12/25/2010	Four to five inches of snow fell countywide including in Troy. Many roads were impassible due to the heavy snow, however, other than a few minor accidents no other problems were reported due to the holiday.	
1/10/2011	Four to six inches of snow fell across the area during the morning and afternoon hours. Snow changed over to freezing rain during the afternoon resulting in nearly an eighth inch of ice on top of the snow. All area roads were covered in snow resulting in the closure of schools and businesses.	
1/28/2014	Snowfall averaged 1 to 2 inches across the county.	
2/11/2014	Snow averaged 1 inch across the county.	
2/12/2014	Snow fall averaged 4-6 inches across the county. In addition, ice accrual averaged 2/10 of an inch.	
3/17/2014	Ice accretion averaged around a hundredth of an inch across the county.	
2/16/2015	Snowfall amounts of an inch to an inch and a half fell across the county. In addition, a tenth to a quarter of an inch of freezing rain accrual was reported.	
2/24/2015	Snowfall amounts of 0.5 to 1 inch fell across the county.	
2/25/2015	Snowfall/sleet amounts of 3 to 4 inches fell across the county.	
1/22/2016	A couple tenths of an inch of freezing rain accrual was reported across the county. In addition, snowfall/sleet amounts of around one half of an inch fell.	
2/15/2016	A trace of freezing rain accrual was reported across the county.	
1/7/2017	Snowfall amounts averaged averaged around 1 inch across the county.	
1/17/2018	Four to six inches of snow fell across the county.	
12/9/2018	Snowfall amounts across the county ranged from a half inch across southern portions to 4 inches across the north. A thin glaze of ice from freezing rain was also reported.	
2/20/2020	Snowfall amounts ranged from 1 inches across southwestern portions of the county to 3 inches across northeastern portions of the county.	
Richland County		
1/18/2000	Light snow moved over the Triad area in the early morning hours of the 18th and sperad slowly east-southeast, reaching the Sandhills and Coastal Plain before daybreak. The snow intensified in	

Date	Description
	the morning in the Triad area where 4 to 6 inches of snow fell. The Sandhills and Coastal Plain received 1 to 3 inches before changing over to sleet and freezing rain in the mid-morning hours. Total accumulations of ice were less than a quarter of an inch. The snow and ice made for slick road conditions across the entire area. Most counties reported numerous accidents, causing many major roads to close.
1/22/2000	A winter storm producing snow and ice moved from west to east across central North Carolina beginning on the evening of the 22nd. The storm produced 2 to 5 inches of snow across the western Piedmont where Stanly and Anson counties reported 4 to 5 inches and the Triad around 2 inches. Amounts less than an inch covered the ground in the Triangle and Rocky Mount areas while the southen tier counties got 1 to 3 inches.
1/24/2000	This record-setting snow storm began with freezing drizzle in the early morning hours of the 24th. Road surfaces quickly froze during this time when the temperature dropped from 32 degrees to 27 degrees. Numerous traffic accidents were reported. By mid-morning, additional precipitation was advancing northward into the southern portions of central North Carolina.
1/28/2000	Sleet and freezing rain began to fall in the wetsern Piedmont of North Carolina on the evening of the 28th. The ice accumulated to a half inch in some locations near the Triad area and along the Virginia border, with most locations in the area receiving around a quarter of an inch of ice. The rest of central North Carolina received a thin coating of less than a quarter inch, creating patchy spots of ice on roads and causing downed trees and power lines. Approximately 30,000 people were without power across the state at the peak of the storm. In eastern portions of the Sandhills and in the Coastal Plain, the freezing rain changed to light rain, preventing more widespread icing in that area. A lull in the precipitation from the predawn hours on Sunday until Sunday morning also kept ice accumulation minimal.
1/3/2002	The first winter storm of the season brought significant snowfall to central North Carolina. An initial round of snow began to fall during the evening of the 2nd. The snow was heavy at times, and accumulated between 3 and 5 inches. The snow changed to sleet and light freezing rain in the Coastal Plain through the early morning hours of the 3rd. After a period of little or no precipitation on the morning of the 3rd, snow began to fall again across the entire area, and was heavy at times, adding an additional 4 to 8 inches. Storm total snowfall amounts were over a foot from the Sandhills northeast across the Piedmont to the Virginia border. The Northwest Piedmont, including the Triad area, received 6 to 10 inches. Snowfall amounts were lower in the Southern and Central Coastal Plain, between 4 and 8 inches, due to the snow mixing with sleet and freezing rain.
12/4/2002	One of the worst ice storms to ever hit Central North Carolina began in the late afternoon on December 4, and ended in the early morning hours of December 5. Precipitation mainly began as a mix of snow and sleet, then turned to freezing rain. A quarter inch of ice or more covered locations mainly to the west of I-95. The highest precipitation amounts stretched across the Piedmont, from Albemarle to Asheboro to Durham to Warrenton, where a half inch to one inch thick layer of ice was reported. 1 to 2 inches of snow also fell in the Triad area and in the counties bordering Virginia with trace amounts elsewhere. Large trees and power lines were downed by the ice all across the area. The storm caused a record number of power outages, as nearly one million people lost power in Central North Carolina, some for nearly a week.
2/16/2003	Sleet and freezing rain fell across much of central North Carolina. Sleet accumulated between 1 and 3 inches across the Piedmont, mainly west of a line from Southern Pines to Raleigh to Roanoke Rapids. The highest accumulations were near the Virginia border and in the Triad area. Mainly freezing rain fell across the Sandhills and Coastal Plain, with ice accumulations around a quarter inch along a narrow corridor from Wadesboro to Smithfield to Rocky Mount.
1/26/2004	A winter storm occurred on January 25th and 26th when snow and sleet fell across central North Carolina. The precipitation fell as snow and sleet over much of the area on the 25th, then became freezing rain over the southeastern sections on the 26th. 3 to 6 inches of snow and sleet fell over the Piedmont on the 25th, with as much as 1/4 inch of freezing rain reported in the southern coastal plain on the 26th.

Date	Description
2/26/2004	A strong storm arrived on February 26th and continued into the morning of the 27th. This storm hit the area with a one-two punch, affecting southern sections on the 26th, then northern sections late on the 26th and the 27th. The first punch dumped heavy snow over portions of the southern Piedmont and Sandhills. Accumulations totaled 6 to locally 10 inches in areas such as Laurinburg, Hamlet, Fayetteville, and Raeford. Much lighter amounts fell to the north during the day. The second punch arrived in western sections of the area late in the day and shifted northeast across central and eastern portions overnight. The heavy snow was accompanied by thunder and lightning across the western Piedmont. Snowfall amounts ranged between 12 to 18 inches from Albemarle northeast to Greensboro. Other sections of the Piedmont, including the Triangle, received between 3 and 6 inches.
12/26/2004	Low pressure developed over the Gulf of Mexico late Saturday afternoon and moved northeast across northern Florida late Saturday night, and up the Southeast U.S. coast on Sunday. A mixture of snow and sleet overspread the area from south to north late Saturday night and continued through early Sunday afternoon. Snow and sleet accumulated generally 3 to 6 inches across the Sandhills, eastern Piedmont, and Coastal Plain. Up to a quarter inch of ice accrued in the southern Coastal Plain.
2/1/2007	The combination of moisture streaming in from the south with cold air over Central North Carolina resulted in an early morning snow event for all of Central North Carolina. Up to 2 inches of snow fell over portions of the piedmont from Albemarle to Lexington and Asheboro. Most other locations picked up around an inch of snow. Even with so little snow, due to the cold ground and timing of the snow during the morning commute the impact on the area was significant.
1/17/2008	Between one to two inches of snow accumulated countywide mostly before daybreak.
1/19/2008	Around one half inche of snow accumulated during the afternoon and early evening hours.
1/20/2009	Between 5 to 6 inches of snow fell across the county over a 12 hour period. Roads were quickly covered with snow resulting in several traffic accidents and the closing of local schools and businesses.
2/4/2009	Between one to two inches of snow fell countywide. Due to the warm ground temperatures snow melted rapidly of roads.
1/30/2010	Around a quarter of an inch of freezing rain fell across the county in addition about a half inch of snow. Several vehicle accidents and 150 power outages were reported. Due to the cold temperatures icy road conditions persisted for several days resulting in the closure of schools and businesses.
2/12/2010	Around four to five inches of snow fell across the entire county Friday night and early Saturday. Due to the storm striking at night and on a weekend impacts were limited with just a few vehicle accidents being reported.
12/16/2010	A prolonged period of light snow and freezing rain in the morning resulted a trace of snow and a trace of freezing rain. This combination created hazardous driving conditions during the morning commute.
12/25/2010	Four to five inches of snow fell countywide including in Rockingham. Many roads were impassible due to the heavy snow, however, other than a few minor accidents no other problems were reported due to the holiday.
1/10/2011	Five to eight inches of snow fell across the area during the morning and afternoon hours. Snow changed over to freezing rain during the afternoon resulting in nearly an eighth inch of ice on top of the snow. All area roads were covered in snow resulting in the closure of schools and businesses.
1/28/2014	Snowfall averaged 2 to 4 inches across the county.
2/11/2014	Snow averaged 1-2 inches across the county.
2/12/2014 2/16/2015	Snow fall averaged 5-6 inches across the county. In addition, ice accrual averaged 2/10 of an inch. Snowfall amounts of around a trace fell across the county. However, a quarter of an inch of freezing rain accrual was reported.

Date	Description
2/24/2015	Snowfall amounts of a trace to 0.5 inches fell across the county.
1/22/2016	One quarter of an inch of freezing rain accrual was reported across the county.
2/15/2016	A trace of freezing rain accrual was reported across the county.
1/7/2017	Snowfall amounts averaged around 1 inch across the county.
1/3/2018	Up to 3 inches of snow fell over eastern and southern portions of the county.
1/17/2018	Up to 3 inches of snow fell, mainly in far northern portions of the county.
2/20/2020	Snowfall amounts ranged from a trace across southern portions of the county to 1 inch across northern portions of the county.
	Scotland County
1/18/2000	Light snow moved over the Triad area in the early morning hours of the 18th and spread slowly east-southeast, reaching the Sandhills and Coastal Plain before daybreak. The snow intensified in the morning in the Triad area where 4 to 6 inches of snow fell. The Sandhills and Coastal Plain received 1 to 3 inches before changing over to sleet and freezing rain in the mid-morning hours. Total accumulations of ice were less than a quarter of an inch. The snow and ice made for slick road conditions across the entire area. Most counties reported numerous accidents, causing many major roads to close.
1/22/2000	A winter storm producing snow and ice moved from west to east across central North Carolina beginning on the evening of the 22nd. The storm produced 2 to 5 inches of snow across the western Piedmont where Stanly and Anson counties reported 4 to 5 inches and the Triad around 2 inches. Amounts less than an inch covered the ground in the Triangle and Rocky Mount areas while the southern tier counties got 1 to 3 inches.
1/24/2000	This record-setting snow storm began with freezing drizzle in the early morning hours of the 24th. Road surfaces quickly froze during this time when the temperature dropped from 32 degrees to 27 degrees. Numerous traffic accidents were reported. By mid-morning, additional precipitation was advancing northward into the southern portions of central North Carolina.
1/28/2000	Sleet and freezing rain began to fall in the western Piedmont of North Carolina on the evening of the 28th. The ice accumulated to a half inch in some locations near the Triad area and along the Virginia border, with most locations in the area receiving around a quarter of an inch of ice. The rest of central North Carolina received a thin coating of less than a quarter inch, creating patchy spots of ice on roads and causing downed trees and power lines. Approximately 30,000 people were without power across the state at the peak of the storm. In eastern portions of the Sandhills and in the Coastal Plain, the freezing rain changed to light rain, preventing more widespread icing in that area. A lull in the precipitation from the predawn hours on Sunday until Sunday morning also kept ice accumulation minimal.
1/3/2002	The first winter storm of the season brought significant snowfall to central North Carolina. An initial round of snow began to fall during the evening of the 2nd. The snow was heavy at times, and accumulated between 3 and 5 inches. The snow changed to sleet and light freezing rain in the Coastal Plain through the early morning hours of the 3rd. After a period of little or no precipitation on the morning of the 3rd, snow began to fall again across the entire area, and was heavy at times, adding an additional 4 to 8 inches. Storm total snowfall amounts were over a foot from the Sandhills northeast across the Piedmont to the Virginia border. The Northwest Piedmont, including the Triad area, received 6 to 10 inches. Snowfall amounts were lower in the Southern and Central Coastal Plain, between 4 and 8 inches, due to the snow mixing with sleet and freezing rain.
1/26/2004	A winter storm occurred on January 25th and 26th when snow and sleet fell across central North Carolina. The precipitation fell as snow and sleet over much of the area on the 25th, then became freezing rain over the southeastern sections on the 26th. 3 to 6 inches of snow and sleet fell over the Piedmont on the 25th, with as much as 1/4 inch of freezing rain reported in the southern coastal plain on the 26th.

Date	Description
2/26/2004	A strong storm arrived on February 26th and continued into the morning of the 27th. This storm hit the area with a one-two punch, affecting southern sections on the 26th, then northern sections late on the 26th and the 27th. The first punch dumped heavy snow over portions of the southern Piedmont and Sandhills. Accumulations totaled 6 to locally 10 inches in areas such as Laurinburg, Hamlet, Fayetteville, and Raeford. Much lighter amounts fell to the north during the day. The second punch arrived in western sections of the area late in the day and shifted northeast across central and eastern portions overnight. The heavy snow was accompanied by thunder and lightning across the western Piedmont. Snowfall amounts ranged between 12 to 18 inches from Albemarle northeast to Greensboro. Other sections of the Piedmont, including the Triangle, received between 3 and 6 inches.
12/26/2004	Low pressure developed over the Gulf of Mexico late Saturday afternoon and moved northeast across northern Florida late Saturday night, and up the Southeast U.S. coast on Sunday. A mixture of snow and sleet overspread the area from south to north late Saturday night and continued through early Sunday afternoon. Snow and sleet accumulated generally 3 to 6 inches across the Sandhills, eastern Piedmont, and Coastal Plain. Up to a quarter inch of ice accrued in the southern Coastal Plain.
2/1/2007	The combination of moisture streaming in from the south with cold air over Central North Carolina resulted in an early morning snow event for all of Central North Carolina. Up to 2 inches of snow fell over portions of the piedmont from Albemarle to Lexington and Asheboro. Most other locations picked up around an inch of snow. Even with so little snow, due to the cold ground and timing of the snow during the morning commute the impact on the area was significant.
1/17/2008	Between one to two inches of snow accumulated countywide mostly before daybreak.
1/19/2008	Two to three inches of snow accumulated during the late afternoon and early evening hours.
1/20/2009	Between 5 to 6 inches of snow fell across the county over a 12-hour period. Roads were quickly covered with snow resulting in several traffic accidents and the closing of local schools and businesses.
2/4/2009	Between one to two inches of snow fell countywide. Due to the warm ground temperatures snow melted rapidly of roads.
1/30/2010	Around a quarter of an inch of freezing rain fell across the county in addition about a half inch of snow. Several vehicle accidents and 150 power outages were reported. Due to the cold temperatures icy road conditions persisted for several days resulting in the closure of schools and businesses.
2/12/2010	Around four to five inches of snow fell across the entire county Friday night and early Saturday. Due to the storm striking at night and on a weekend, impacts were limited with just a few vehicle accidents being reported.
12/16/2010	A prolonged period of light snow and freezing rain in the morning resulted a trace of snow and a trace of freezing rain. This combination created hazardous driving conditions during the morning commute.
12/25/2010	Four to five inches of snow fell countywide including in Laurinburg. Many roads were impassible due to the heavy snow, however, other than a few minor accidents no other problems were reported due to the holiday.
1/10/2011	Six to eight inches of snow fell across the area during the morning and afternoon hours. Snow changed over to freezing rain during the afternoon resulting in nearly an eighth inch of ice on top of the snow. All area roads were covered in snow resulting in the closure of schools and businesses.
1/28/2014	Snowfall averaged 2 to 4 inches across the county.
2/11/2014	Snowfall averaged around 3 inches across the county.
2/12/2014 2/16/2015	Snow fall averaged 2-5 inches across the county. In addition, ice accrual averaged 1/10 of an inch. Snowfall amounts of around a trace fell across the county. However, a quarter to a third of an inch of freezing rain accrual was reported.

Date	Description
2/24/2015	Snowfall amounts of a trace to 0.5 inches fell across the county.
1/22/2016	One quarter of an inch of freezing rain accrual was reported across the county.
1/7/2017	Snowfall amounts averaged less than half of an inch. There was also trace ice from light freezing rain.
1/7/2017	Snowfall amounts averaged less than half of an inch. There was also trace ice from light freezing rain.
1/3/2018	Total snowfall averaged 4 to 6 inches across the county.
2/20/2020	Snowfall amounts ranged from a trace across southern portions of the county to half an inch across northern portions of the county.