



Buncombe Madison

Regional Hazard Mitigation Plan

DRAFT



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SECTION 1

INTRODUCTION

This section provides a general introduction to the Buncombe Madison 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 winter storms, floods, and landslides, 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 Buncombe Madison Region is located in the western part of North Carolina and includes the two counties and the municipalities within the counties. This area is vulnerable to a wide range of natural hazards such as landslides, winter storms, severe thunderstorms, and floods. These hazards threaten the life and safety of residents in the Buncombe Madison 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 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.

Both of the counties and their municipal jurisdictions have an existing hazard mitigation plan that has evolved over the years, as described in Section 2: *Planning Process*. This regional plan draws from both of the County plans to document 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 Buncombe Madison 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 Act

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, local and Tribal 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 or Tribal government applying for federal mitigation grant funds. These funds include the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation (PDM) program, both 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.

Additionally, the Biggert Waters Flood Insurance Reform Act of 2012 modified the existing Flood Mitigation Assistance (FMA) program. One of the requirements of this Act is that a FEMA-approved Hazard Mitigation Plan is now required if communities wish to be eligible for these FEMA mitigation programs.

The Buncombe Madison Regional Hazard Mitigation Plan has been prepared in coordination with FEMA Region IV and the North Carolina Division of Emergency Management (NCDEM) 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 Buncombe Madison Regional Hazard Mitigation Plan is to:

- ✧ Merge the existing Buncombe County and Madison County plans into one regional plan;
- ✧ Complete update of existing plans to demonstrate progress and reflect current conditions;
- ✧ 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 Buncombe Madison Regional Hazard Mitigation Plan is on those hazards determined to be “high” or “moderate” risks to the Buncombe Madison 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 counties and municipalities 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 Buncombe and Madison as well as their incorporated jurisdictions. **Table 1.1** indicates the participating jurisdictions.

TABLE 1.1: PARTICIPATING JURISDICTIONS IN THE BUNCOMBE MADISON REGIONAL HAZARD MITIGATION PLAN

Buncombe County	
Asheville	Montreat
Biltmore Forest	Weaverville
Black Mountain	Woodfin
Madison County	
Hot Springs	Mars Hill
Marshall	

1.4 AUTHORITY

The Buncombe Madison 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, 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); and
- ✧ Biggert Waters Flood Insurance Reform Act of 2012(P.L. 112-141).

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 Buncombe Madison 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 Buncombe Madison Region. The risk assessment also attempts to define any hazard risks that may uniquely or exclusively affect specific areas of the Buncombe Madison Region.

The Risk Assessment begins by identifying hazards that threaten the Buncombe Madison 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, FEMA's Hazus^{®MH} loss estimation methodology is used to evaluate known hazard risks by their relative long-term cost in expected damages. In essence, the information generated through the risk assessment serves a critical function as the participating jurisdictions in the Buncombe Madison 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 Buncombe Madison Region's capacity to implement meaningful mitigation strategies 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 Buncombe Madison 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 jurisdictions participating in the Buncombe Madison Regional Hazard Mitigation Plan 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 and municipal 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 Buncombe Madison 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 the jurisdictions participating in the Buncombe Madison Regional plan will take to ensure the Plan's continuous long-term implementation. The procedures also include the manner in which the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

County-specific ***Annexes*** have been created to include specific information for each County and participating jurisdiction. Topics covered in the annexes include community profile, risk assessment, vulnerability, and capability assessment information. The mitigation actions relevant for each particular county and their participating municipal jurisdictions are also included in the Annex.

SECTION 2

PLANNING PROCESS

This section describes the planning process undertaken to develop the Buncombe Madison Regional Hazard Mitigation Plan. It consists of the following eight subsections:

- ✧ 2.1 Overview of Hazard Mitigation Planning
- ✧ 2.2 History of Hazard Mitigation Planning in the Buncombe Madison Region
- ✧ 2.3 Preparing the 2014 Plan
- ✧ 2.4 The Buncombe Madison Regional Hazard Mitigation Planning Team
- ✧ 2.5 Community Meetings and Workshops
- ✧ 2.6 Involving the Public
- ✧ 2.7 Involving the Stakeholders
- ✧ 2.8 Documentation of Plan Progress

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.

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 evaluation and enhancement of the mitigation plan itself. These plan maintenance procedures ensure that the Plan remains a current, dynamic, and effective planning document over time that becomes integrated into the routine local decision making process.

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

- ✧ saving lives and property,
- ✧ saving money,
- ✧ speeding recovery following disasters,
- ✧ reducing future vulnerability through wise development and post-disaster recovery and reconstruction,

- ✧ expediting the receipt of pre-disaster and post-disaster grant funding, and
- ✧ demonstrating a firm commitment to improving community health and safety.

Typically, communities that participate in mitigation planning are 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 BUNCOMBE MADISON REGION

Both of the counties participating in this Plan have 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:

- ✧ *Buncombe County – County-Wide All Hazards Mitigation Plan (September 2011)*
 - ✧ City of Asheville
 - ✧ Town of Biltmore Forest
 - ✧ Town of Black Mountain
 - ✧ Town of Montreat
 - ✧ Town of Weaverville
 - ✧ Town of Woodfin
- ✧ *Hazard Mitigation Plan for Madison County, North Carolina and the Municipalities of Hot Springs, Marshall and Mars Hill (June 2013)*
 - ✧ Town of Hot Springs
 - ✧ Town of Mars Hill
 - ✧ Town of Marshall

Each of the county-levels plans was developed using the multi-jurisdictional planning process recommended by the Federal Emergency Management Agency (FEMA). For this plan, all of the aforementioned jurisdictions have joined to form a regional plan. All of the jurisdictions that participated in previous planning efforts have participated in the development of this regional plan.

The process of merging the two plans listed above into this regional plan is described in more detail below.

2.3 PREPARING THE 2014 PLAN

Hazard mitigation plans are required to be updated every five years to remain eligible for federal mitigation funding. To simplify planning efforts, the jurisdictions in the Buncombe Madison Region decided to join together to create the *Buncombe Madison Regional Hazard Mitigation Plan*. This allows resources to be shared amongst the participating jurisdictions and eases the administrative duties of all of the participants by combining the existing county plans into one multi-jurisdictional plan.

To prepare the 2014 *Buncombe Madison Regional Hazard Mitigation Plan*, Atkins was hired as an outside consultant to provide professional mitigation planning services. To meet requirements of the Community Rating System, the region ensured that the planning process was facilitated under the direction of a professional planner. Nathan Slaughter from Atkins served as the lead planner for this project and is a member of the American Institute of Certified Planners (AICP).

Per the contractual scope of work, the consultant team followed the mitigation planning process recommended by FEMA (Publication Series 386 and Local Mitigation Plan Review Guide) and recommendations provided by North Carolina Division of Emergency Management (NCEM) mitigation planning staff¹. 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 (October 2011) for reference as they completed the Plan.

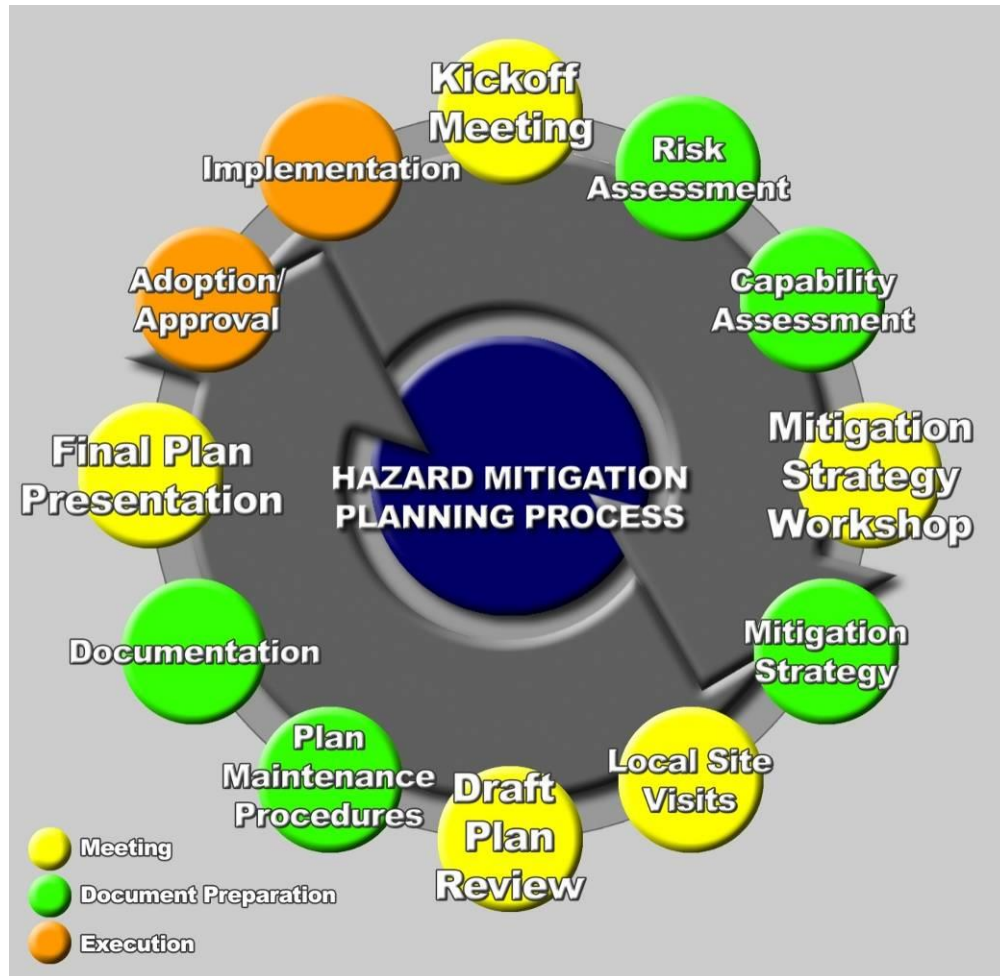
Although each participating jurisdiction had already developed a plan in the past, the combination of the two plans into one regional plan still required making some plan update revisions based on FEMA's Local Mitigation Plan Guide. Since all sections of the regional plan are technically new, plan update requirements do not apply. However, since this is the first regional plan among the jurisdictions, key elements from the previous approved plans are referenced throughout the document (e.g., existing actions) and required a discussion of changes made. For example, all of the risk assessment elements needed to be updated to include most recent information. It was also necessary to formulate a single set of goals for the region, but they were based on previously determined goals (Section 8: *Mitigation Strategy*). The Capability Assessment section includes updated information for all of the participating jurisdictions and the Mitigation Action Plan provides implementation status updates for all of the actions identified in the previous plans.

The process used to prepare this Plan included twelve major steps that were completed over the course of approximately nine months beginning in September 2013. 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*.

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

Over the past five years, each participating jurisdiction has been actively working to implement their existing plans. This is documented in the Mitigation Action Plan through the implementation status updates for each of the Mitigation Actions. The Capability Assessment also documents changes and improvements in the capabilities of each participating jurisdiction to implement the Mitigation Strategy.

FIGURE 2.1: MITIGATION PLANNING PROCESS FOR THE BUNCOMBE MADISON REGION



2.4 THE BUNCOMBE MADISON REGIONAL HAZARD MITIGATION PLANNING TEAM

In order to guide the development of this Plan, the Buncombe Madison jurisdictions created the Buncombe Madison Regional Hazard Mitigation Planning Team (Regional Hazard Mitigation Planning Team or Regional Planning Team). The Regional Hazard Mitigation Planning Team represents a community-based planning team made up of representatives from various county and municipal departments, and other key stakeholders identified to serve as critical partners in the planning process.

Beginning in September 2013, the Regional Hazard Mitigation Planning Team 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, team members routinely communicated and were kept informed through an e-mail distribution list.

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

- ✧ participate in Regional Hazard Mitigation Planning Team meetings and workshops
- ✧ provide best available data as required for the risk assessment portion of the Plan
- ✧ provide information that will help complete the 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 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 2014 *Buncombe Madison Regional Hazard Mitigation Plan*

Table 2.1 lists the members of the Regional Hazard Mitigation Planning Team who were responsible for participating in the development of the Plan. Team members are listed in alphabetical order by last name.

TABLE 2.1: MEMBERS OF THE BUNCOMBE MADISON REGIONAL HAZARD MITIGATION PLANNING TEAM

NAME	POSITION	DEPARTMENT / AGENCY
Bandy, Chad	Engineer	NCDOT
Barcklow, Cynthia Fox	Planner	Buncombe County Planning
Cervantes, Brandon	Forest Service Liaison	USFS
Coates, McCray	Stormwater Services Manager	City of Asheville
Deyton, Chris	Engineer	NCDOT
Fox, Eddie	Fire Chief	Town of Mars Hill
Fox, Cleve	Forest Service Liaison	USFS
Freeman, Steve	Public Works Director	Town of Montreat
Garrison, Lewis	Deputy Fire Marshal	Asheville FD
Harrold, Josh	Planner	Town of Black Mountain
Harwood, Jayson	Fire Marshal	Weaverville Fire
Jones, Steve	Fire Chief	Town of Black Mountain
Ledford, Angela*	Planner	Buncombe County EM
Malone, Terry	Fire Chief	Weaverville Fire
Meadows, Joe	Division Chief	Asheville FD
Moore, Abby	Emergency Management Specialist	Asheville Fire RRT-6
Nalley, Ron	Administrator	Town of Montreat

NAME	POSITION	DEPARTMENT / AGENCY
Ramsey, Martha	Zoning Officer	Town of Marshall
Roberts, Edward	Fire Liaison	Laurel Fire Department
Smith, Nelson	Town Manager	Biltmore Forest
Stines, Allen	Radio Operator	Madison County Amateur Radio
Stoude, Stephen	EMS Representative	Madison EMS
Tuch, Shannon	Planning Director	Asheville Planning and Development Services
Vehaun, Jerry	Emergency Services Director	Buncombe County EM
Williams, Ted	Deputy Fire Chief	Weaverville FD
Willis, Jeff*	Emergency Management Director	Madison County EM
Young, Jason	Town Manager	Town of Woodfin

* Served as the County's main Point of Contact

Table 2.2 lists points of contact for several of the jurisdictions 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 via email and phone conversations. These members are listed in alphabetical order by first name below.

TABLE 2.2: MEMBERS DESIGNATING REPRESENTATIVES TO BUNCOMBE MADISON REGIONAL HAZARD MITIGATION PLANNING TEAM

NAME	POSITION	DEPARTMENT / AGENCY / TITLE
Brian Reese	Mayor	Town of Hot Springs

2.4.1 Multi-Jurisdictional Participation

The Buncombe Madison Regional Multi-Jurisdictional Hazard Mitigation Plan includes two counties and nine 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 projects, if applicable; 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,

SECTION 2: PLANNING PROCESS

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 update.² 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.

The following meetings were held during the development of this plan. Copies of agendas, sign-in sheets, minutes, and handout materials for all meetings and workshops can be found in Appendix D.



November 7, 2013 Buncombe Madison Regional Hazard Mitigation Planning Team Meeting

November 7, 2013

First Regional Hazard Mitigation Planning Team Meeting – Project Kickoff Meeting - Weaverville Town Hall

April 7, 2014

Second Regional Hazard Mitigation Planning Team Meeting – Mitigation Strategy Meeting - Weaverville Town Hall

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 involved 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 *Buncombe Madison Regional Hazard Mitigation Plan* was sought using two methods: (1) public survey instruments were made available in hard copy and online;

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

and (2) copies of the draft Plan deliverables were made available for public review on county and municipal 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. In addition, 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 region and on county and municipal 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 Regional Hazard Mitigation Planning Team 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 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 Team 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. A total of 176 survey responses were received, which provided valuable input for the Regional Hazard Mitigation Planning Team to consider in the development of the plan update. Selected survey results are presented below.

- ✧ Approximately 46 percent of survey respondents had been impacted by a disaster, mainly flooding, hurricanes, and winter storms.
- ✧ Respondents ranked Severe Winter Storm/Freeze as the highest threat to their neighborhood (28 percent), followed by Flood (20 percent) and Severe Thunderstorm/High Wind (15 percent).
- ✧ Approximately 43 percent of respondents have taken actions to make their homes more resistant to hazards and 84 percent are interested in making their homes more resistant to hazards.
- ✧ 75 percent of respondents do not know what office to contact regarding reducing their risks to hazards.
- ✧ Natural Resource Protection, Prevention, and Emergency Services were ranked as the most important activities for communities to pursue in reducing risks.

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)(2): The planning process shall include an opportunity for neighboring communities, local and regional agencies involved 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 both of the County Emergency Management leads to initiate outreach to stakeholders to be involved in the planning process. The project consultant sent out a list of recommended stakeholders provided from FEMA Publication 386-1 titled **Getting Started: Building Support for Mitigation Planning**. The list of recommended stakeholders is found in Appendix C of that publication (Worksheet #1: Build the Planning Team) and has been included in **Appendix D** of this plan to demonstrate 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.

In addition to participation from a wide variety of County-level departments, additional stakeholders that were involved in the process of developing this plan included: North Carolina Department of Transportation and the US Forest Service.

In addition to the efforts described above, the regional Hazard Mitigation Planning Team encouraged more open and widespread participation in the mitigation planning process by designing and distributing the *Public Participation Survey*. These opportunities were provided for local officials, residents, businesses, academia, and other private interests in the 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 Buncombe Madison 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 Buncombe Madison 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 developing the Regional 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 Buncombe Madison 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 Buncombe Madison Region is located in Western North Carolina in the Blue Ridge Mountain portion of the Appalachian Mountains. For the purposes of this plan, the Buncombe Madison Region includes the two counties of Buncombe and Madison and their participating municipalities. An orientation map is provided as **Figure 3.1**.

The Buncombe Madison Region includes many natural attractions. Located in the Blue Ridge Mountains, the area draws tourists and outdoor enthusiasts alike to the Pisgah National Forest. The Pisgah National Forest covers over 500,000 acres, has some of the highest mountains in the eastern United States, and includes over 60 miles of Appalachian Trail. A portion of the scenic Blue Ridge Parkway also traverses the region.

Fall is considered the region’s “peak season” due to the colorful foliage; however, tourists visit the area year-round to see the diverse wildlife and waterfalls, hike, bike, fish, picnic, and camp. Other natural attractions include the French Broad River and hot springs. In addition, the Biltmore Estate, America’s largest privately-owned house, is also located in the region.

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
Buncombe County	657 square miles
Madison County	450 square miles

Source: United States Census Bureau

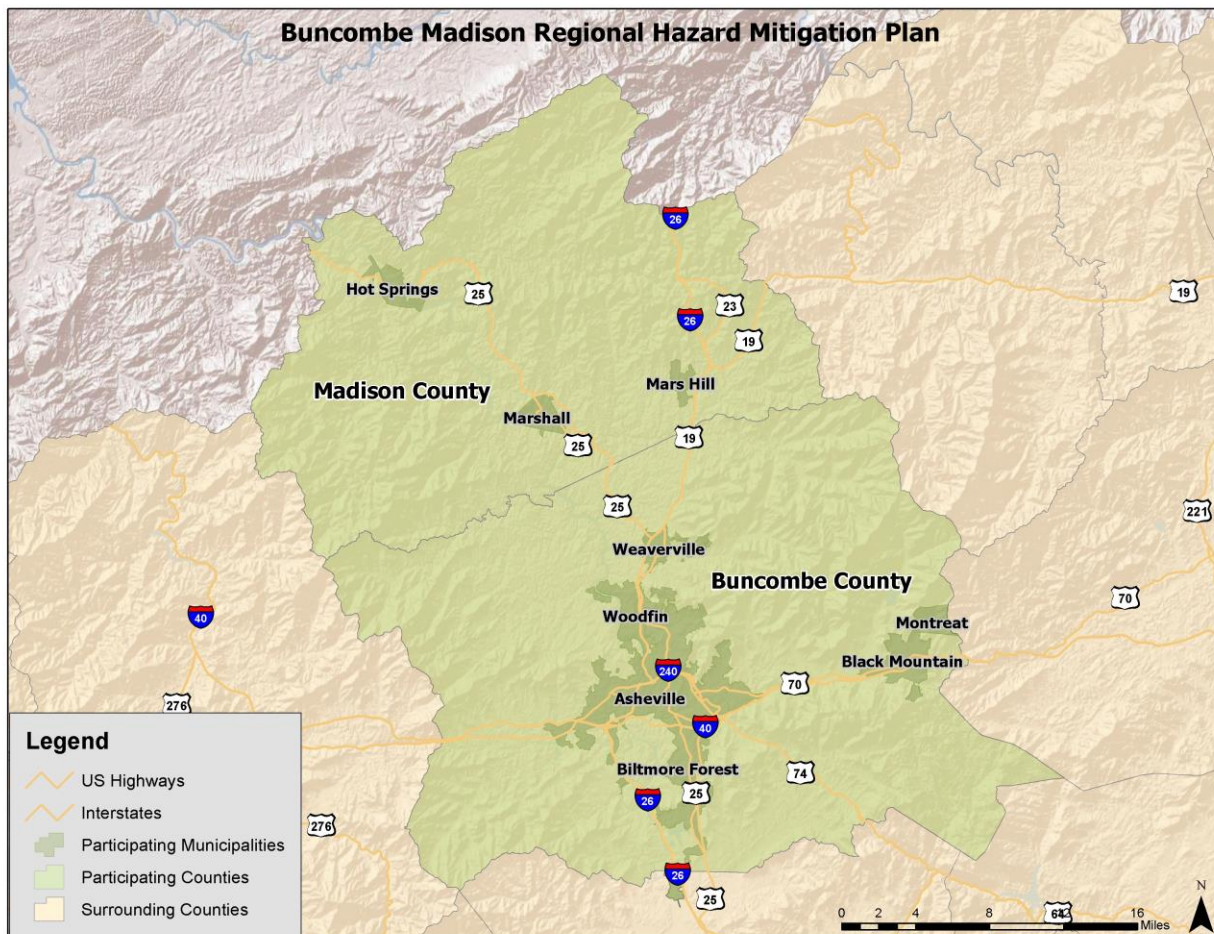
The Buncombe Madison Region enjoys a moderate climate that is characterized by mild winter and warm summers; however, variation in elevation and topography can drastically affect local weather. In general, the spring months are marked by unpredictable weather and changes can occur rapidly with sunny skies yielding to snow in just a few hours. From March through May, temperatures in the lower elevations have an average high of 67°F and an average low of 45°F. Typically the weather is milder by mid-April and warm in May.

In the summer, afternoon showers and thunderstorms are common and average temperatures increase with afternoon highs reaching the 80s in July and August. At higher elevations, weather is much more pleasant during the summer.

September through mid-November is typified by clear skies and cooler weather that alternates between warm days and cool nights. Daytime highs are usually in the 70s during September but fall to the 50s and 60s by early November. The first frost often occurs in late October and the lows are near freezing by November. During these autumn months, there are only occasional rain showers making it the driest period of the year.

Winter in the Buncombe Madison Region is generally moderate but extremes do occur, especially at higher elevations. About half of the days from mid-November through February have high temperatures of 50°F or more. Winter lows are usually at or below freezing but temperatures can drop to -20°F at high elevations. Snow is most common during January and February. At low elevations, snows of one inch or more occur one to five times per year; however, in the higher mountains, snow falls more frequently and up to two feet can fall at one time.

FIGURE 3.1: BUNCOMBE MADISON REGION ORIENTATION MAP



3.2 POPULATION AND DEMOGRAPHICS

Buncombe County is the largest participating county by area and it also has the largest population. Between 2000 and 2010, the majority of participating jurisdictions experienced population growth, with the exception of Biltmore Forest and Host Springs which saw declines. In total, Buncombe County experienced growth of 15.5% whereas Madison County only experienced a 5.7% increase. Population counts from the US Census Bureau for 1990, 2000, and 2010 for each of the participating counties are presented in **Table 3.2**.

TABLE 3.2: POPULATION COUNTS FOR PARTICIPATING COUNTIES

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010
Buncombe County	174,821	206,330	238,318	15.5%
Madison County	16,953	19,635	20,764	5.7%

Source: United States Census Bureau

Based on the 2010 Census, the median age of residents of the participating counties ranges from 41 to 43 years. The racial characteristics of the participating counties are presented in **Table 3.3**. Generally, whites make up the majority of the population in the region accounting for over 87 and 96 percent of the population in Buncombe and Madison Counties, respectively.

TABLE 3.3: DEMOGRAPHICS OF PARTICIPATING COUNTIES

Jurisdiction	White, Percent (2010)	Black or African American, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Asian, Percent (2010)	Native Hawaiian or Other Pacific Islander, Percent (2010)	Other Race, Percent (2010)	Two or More Races, percent (2010)	Persons of Hispanic Origin, Percent (2010)*
Buncombe County	87.4%	6.4%	0.4%	1.0%	0.1%	2.6%	2.1%	6.0%
Madison County	96.5%	1.2%	0.2%	0.3%	0.0%	0.5%	1.3%	2.0%

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

Source: United States Census Bureau

3.3 HOUSING, INFRASTRUCTURE, AND LAND USE

3.3.1 Housing

According to the 2010 US Census, there were 123,973 housing units in the Buncombe Madison Region, the majority of which are single family homes or mobile homes. Housing information for the two participating counties is presented in **Table 3.4**. As shown in the table, Buncombe County has a lower percentage of seasonal housing units compared to the Madison County.

TABLE 3.4: HOUSING CHARACTERISTICS OF PARTICIPATING COUNTIES

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)
Buncombe County	93,973	113,365	3.4%	\$192,200
Madison County	9,722	10,608	9.5%	\$163,100

Source: United States Census Bureau

3.3.2 Infrastructure

Transportation

The Buncombe Madison Region contains some of North Carolina's most recognized scenic roadways. The most popular among tourists is the Blue Ridge Parkway. This National Parkway runs 469 miles through 29 Virginia and North Carolina Counties, including Buncombe County. Built to connect Shenandoah National Park to the Great Smoky Mountain National park, the Parkway has been the most visited unit of the National Park System every year since 1946 with the exception of 1949.

Another scenic highway unique to the region is the I-26 Scenic Byway. The nine-mile segment of I-26 that runs through Madison County is the only interstate in the state to be selected as a scenic byway. Running east to west, the stretch begins at Exit 9 north of Asheville (traveling on I-26 West) and offers spectacular views from some of the highest elevations on any interstate in North Carolina.

Other scenic highways in the region, also rich in history, include the French Broad Overview and the Appalachian Medley. The French Broad Overview consists of multiple roadways passing through Buncombe and Madison Counties for 17 miles following the French Broad River. The route begins at the I-26 Weaverville Exit (Exit 29) and proves through Alexander towards Marshall, including routes SR 1727, NC 251, and US 25B/70B. The Appalachian Medley byway begins its 45-mile stretch at I-40 Exit 24 on NC 209 just south of the region and travels north along NC 209 through Madison County. From NC 29, the route follows US 25/70 and ends in Walnut.

In addition to the designated scenic routes, three interstates (I-26, I-40, and I-240), five U.S. highways (US Highways 19, 23, 25, 70, and 74), and fifteen North Carolina state routes (NC Routes 9, 63, 81, 112, 146, 151, 191, 197, 208, 209, 212, 213, 251, 280, and 694) complete the region's highway system. The primary mode of transportation is personal vehicle with the City of Asheville being the only jurisdiction to provide public transit service in the region.

The Asheville Regional Airport is the largest airport in the mountains serving all of Western North Carolina. The airport currently offers non-stop commercial flights on four airlines to six major cities. The major airport located nearest to the region is the Charlotte Douglas International airport, which offers non-stop commercial flights on nine airlines to numerous destinations across the eastern US and Midwest as well as to several international destinations. This airport is approximately 125 miles from Asheville. Other major nearby airports include the Hartsfield-Jackson Atlanta International Airport in Georgia and the Nashville Metropolitan Airport in Tennessee.

Utilities

Electrical power in the Buncombe Madison Region is provided by Duke Progress Energy and French Broad Electric Membership Corporation (EMC). Water and sewer services are provided by the City of Asheville, Metropolitan Water District, and Woodfin Water District. Since municipal water systems are

extremely limited in the mountains, private or shared wells and septic systems are considered the norm in this region.

Community Facilities

There are a number of public buildings and community facilities located throughout the Buncombe Madison Region. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 2 emergency operations centers, 49 fire/EMS stations, 11 police stations, 8 medical care facilities, and 63 public schools located within the study area.

The medical facilities located in the region are concentrated in the Asheville area; including Mission Hospital and Asheville Surgery Center, a 744-bed general medical and surgical provider; Asheville Specialty Hospital, a 34-bed facility offering long-term acute care; and CarePartners Rehabilitation Hospital, an 80-bed rehabilitation facility. Additionally, Asheville is home to the Charles George VA Medical Center which provides care for veterans. Other medical facilities in the study area include: Mountain Area Health Education Center (MAHEC) in Asheville which provides health care education and services, and The Sisters of Mercy Urgent Care with facilities in West Asheville, South Asheville, and Weaverville.

In addition to Pisgah National Forest, the Buncombe Madison Region contains numerous local, state, and national parks and recreation areas. These include the Blue Ridge Parkway, French Broad River, Lake Julian, and the privately-owned Biltmore Estate. These facilities offer recreational opportunities to area residents and millions of visitors each year.

3.3.3 Land Use

Aside from Asheville, many areas of the Buncombe Madison Region are undeveloped or sparsely developed due to the mountainous terrain and the conservation of land in state and national parks and forests. As shown in **Figure 3.1** above, there are several small incorporated municipalities located throughout the study area comprising a large number of the region's population. The incorporated areas are also where many businesses, commercial uses, and institutional uses are located. Land uses in the balance of the study area generally consist of rural residential development, agricultural uses, recreational areas, and forestland.

Local land use (and associated regulations, or lack thereof) is further discussed in *Section 7: Capability Assessment*.

3.4 EMPLOYMENT AND INDUSTRY

The early modern economy in the Buncombe Madison Region was built around extractive industries; such as mining, logging, and agriculture; manufacturing; and textiles. Like many other mountain towns in North Carolina, the jurisdictions in the Buncombe Madison Region have focused recent economic development efforts on cultural and natural heritage tourism.

According to the North Carolina Employment Security Commission, in 2012, Buncombe County had an average annual employment of 117,664 workers and an average unemployment rate of 7.5 percent (compared to 9.5 for the state). In 2012, the Education and Health Services industry employed 27.4 percent of the County's workforce followed by Trade, Transportation, and Utilities (20.3%); Leisure and

SECTION 3: COMMUNITY PROFILE

Hospitality (14.7%); Professional and Business Services (10.7%); and Manufacturing (9.5%). From 2010 to 2012, the average annual median household income in Buncombe County was \$43,177 compared to \$45,215 for the state of North Carolina.

Madison County had an average annual employment of 9,223 workers and an average unemployment rate of 9.2 percent in 2012. According to the NCEC, in 2012, the Education and Health Services industry was again the largest employment sector with 40.6 percent of the County's workforce. The other leading industries were Trade, Transportation, and Utilities (14.7%); Public Administration (11.6%); Leisure and Hospitality (10.8%); and Manufacturing (9.5%). The average annual median household income in Madison County was \$36,961 from 2010 to 2012.