

CALDWELL COUNTY



MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

*Participating Jurisdictions: Cahah's Mountain, Cedar Rock,
Gamewell, Granite Falls, Hudson, Lenoir, Rhodhiss, and Sawmills*

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SECTION 1. INTRODUCTION AND PLANNING PROCESS

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

North Carolina Emergency Management summarizes hazard mitigation as follows:

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

A. Hazard Mitigation Legislation

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

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



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

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

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

B. What is Hazard Mitigation and Why is it Important to Caldwell County?

1. What is Hazard Mitigation?

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

2. Why is Hazard Mitigation Important to Caldwell County?

Hazard mitigation offers the following benefits to Caldwell County, and the Hazard Mitigation Plan (HMP) is being completed to attain the following goals:

- ▶ Saving lives and reducing injuries;
- ▶ Preventing or reducing property damage;
- ▶ Reducing economic losses;
- ▶ Minimizing social dislocation and stress;
- ▶ Minimizing agricultural losses;



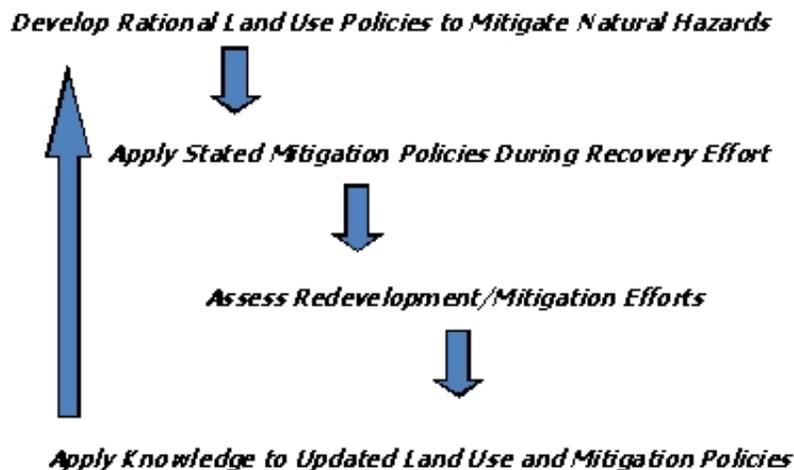
- ▶ Maintaining critical facilities in functional order;
- ▶ Protecting infrastructure from damage;
- ▶ Protecting mental health;
- ▶ Limiting legal liability of government and public officials;
- ▶ Providing options for political leaders regarding hazard reduction;
- ▶ Fulfilling Federal and State requirements for receipt of future disaster recovery and hazard mitigation assistance
- ▶ Improve inter-jurisdictional cooperation and coordination, especially regarding the reduction of natural hazard impacts.

Hazard mitigation planning is intended to construct a framework for the prevention and reaction to disasters if and when they may occur. The framework created by this plan will help to instill an ongoing effort to lessen the impact that disasters have on citizens and property within Caldwell County.

The above listed items are but only a few of the many complex issues that the formulation of such a process will ultimately address.

C. Plan Format

The planning process for the update of the Caldwell County Hazard Mitigation Plan involved a comprehensive review of all components of the existing document. The Mitigation Advisory Committee subscribed to the following strategic planning model:





Through the employment of this model, the MAC reviewed all efforts carried out since the adoption of the 2004 plan and decided whether these efforts proved effective based on a current risk assessment, prior occurrences of inclement weather activity, and the current political and budgetary climate. Through these discussions, revised strategies were developed based on the following factors:

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

The plan format is consistent with the 2004 plan; however, several of the sections have been revised based on input and direction provided by the MAC. The plan format is provided below:

Section 1. Introduction

This section of the HMP update provides a statement of the problem, the purpose of the plan, acknowledges the participants in the planning process, describes the planning process, and reviews the citizen participation and adoption process for the HMP.

Section 2. Community Profile

This section of the HMP update outlines the existing conditions within the County and the participating municipalities. These overviews address the following existing conditions: demographics, topography, climate, and other general information regarding the community.

Section 3. Identification of Potential Natural Hazards

This section of the HMP update provides relevant data and narrative descriptions of natural hazards that Caldwell County's citizens are subject to, based on interviews with local



officials and on public data sources such as the National Climatic Data Center and FEMA, for example. The MAC, through the update process, reviewed the hazards outlined within the 2004 plan to ensure that they still pose a threat to the County. Additionally, this section was updated to reflect occurrences of each natural hazard type since adoption of the 2004 plan.

Section 4. Community Capability Assessment

The section of the HMP update provides an assessment of each community's current hazard mitigation practices, as well as its potential to engage in mitigation activities. The capability assessment has been reviewed by the MAC as part of the comprehensive update process. This effort involved the updating of information for Caldwell County as well as all participating jurisdictions relating to: administrative capabilities, infrastructure resources, land development controls, and existing local and state policy programs.

Section 5. Vulnerability Assessment

This section of the HMP update identifies specific locations throughout the County that are vulnerable to natural hazards through narrative, data, and maps; establishes "Geographic Planning Areas", which are areas of particular vulnerability to natural hazards; and provides detailed data and analysis of these areas.

As a component of the mitigation plan update, the vulnerability analysis was updated to reflect the 2009 development characteristics within Caldwell County. This effort also involved the review and update of the critical facilities inventory initially established through the 2004 planning process.

Section 6. Mitigation Goals, Objectives, and Strategies

This section of the HMP identifies each community's goals, objectives, and specific strategies which will respond to identified mitigation needs by completing the following steps:

- ▶ Prioritizing each community's Geographic Planning Areas (GPA)
- ▶ Determining which types of mitigation strategies are appropriate for each GPA
- ▶ Formulating selection criteria
- ▶ Identifying policies to carry out the mitigation strategies
- ▶ Creating an action plan for the mitigation strategies
- ▶ Prioritizing the policies
- ▶ Identifying funding sources
- ▶ Assigning implementation responsibilities



The MAC undertook a comprehensive review of the mitigation strategies outlined within the 2004 plan. This review led to the modification of all existing mitigation strategy statements as reflected in Section 6 of the plan update. Through this effort, the County is attempting to strengthen its existing multi-jurisdictional mitigation program. The MAC feels that the revised statements are more effective and appropriately define how mitigation initiatives outlined within the plan should be carried out. Please note that the overhaul of the 2004 policies makes it difficult to cross reference the updated strategies with those outlined in the 2004 plan.

Section 7. Monitoring, Evaluating and Reporting Progress

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

Maps referenced throughout the HMP will be included in Appendix A.

D. Incorporation of Existing Plans, Studies, and Reports

Caldwell County utilized several existing policy and regulatory documents to assist in the preparation of the Hazard Mitigation Plan Update. Information from the County's Comprehensive Plan, Zoning Ordinance and Flood Damage Prevention Ordinance were instrumental in compiling information presented in this update. Additionally, the Comprehensive Plan, in conjunction with the Flood Damage Prevention Ordinance and Zoning Ordinance, provided the County with the tools to conduct a vulnerability assessment. Through implementation of this plan, the County, as well as all participating jurisdictions, will continue to reference these documents in an effort to carry out an effective mitigation program throughout Caldwell County.

E. Planning Process

In 2008, Caldwell County applied for and received a Pre-Disaster Mitigation (PDM) Program grant through the North Carolina Division of Emergency Management (NCEM). In 2009, NCEM approved the County's grant application (NCEM Project Number PDM-PL-04-2009-002) and the hazard mitigation planning process began within Caldwell County. Upon receipt of the aforementioned PDM grant, primary responsibility for development of the Caldwell County Hazard Mitigation Plan was placed in the hands of Caldwell County Emergency Services under the direction of Director Tommy Courtner.



In August of 2009, Caldwell County procured the services of Holland Consulting Planners, Inc., (HCP) of Wilmington, North Carolina, to assist in the development of a comprehensive Hazard Mitigation Plan Update.

Subsequent to establishing a work authorization with the planning consultant, Caldwell County held an initial scoping meeting with the project consultant. This meeting involved a general discussion of how the project should be carried out, including establishing a Mitigation Advisory Committee (MAC) to oversee the update. It was determined that the MAC would be comprised of County staff members, as well as a representative from each participating municipal jurisdiction.

County staff members and MAC members, along with the consultant hired to assist in working through the planning process, completed data collection which contributed towards plan development. This data assisted primarily in the areas of hazard identification and analysis, mapping of hazards, assessment of community capabilities, and identification of critical facilities.

Dealing with natural hazards and disasters is rarely the responsibility of one employee or official in any community. Rather, it is a team effort, often comprised of representatives from administration, planning/zoning, public works, fire/police, and other offices.

The County convened the MAC in order to efficiently address this "multi-disciplinary" aspect of hazard mitigation. MAC members were charged with the responsibility of working through the planning process, and assisting the consultant through compiling the information, input, and background required to develop the plan. The following are the MAC members:

<u>MAC Member</u>	<u>Jurisdiction/Agency</u>
Trevor Key	Caldwell County Emergency Services
Tommy Courtner	Caldwell County Emergency Services
Connie South	Town of Cahah's Mountain
Bob Floyd	Village of Cedar Rock
Mary Carter	Town of Gamewell
Greg Wilson	Town of Granite Falls
Rebecca Bentley	Town of Hudson
Chuck Beatty	City of Lenoir
Barbara Harmon	Town of Rhodhiss*
Robert Frye	Town of Sawmills
Jon Pilkenton	Western Piedmont Council of Governments

*The Town of Rhodhiss is a new participant under the Caldwell County HMP Update.



A series of meetings were held to develop the Hazard Mitigation Plan Update, each focusing on a specific aspect of the planning process. A total of four MAC meetings were held, and several additional meetings took place between staff and various interests involving plan development. The following provides a brief summary of all meetings held and what was addressed at each:

- ▶ August 2009: In August of 2009 MAC representatives involving County staff convened for a scoping and overview meeting with the consultant. This meeting focused on the planning process, and what the County should aim to achieve in working through the development of a Hazard Mitigation Plan Update.
- ▶ September 2009: In September the second MAC meeting was held. The agenda of this meeting focused on a discussion aimed at reviewing critical/community facilities and the goals, policies, and implementing actions within the County's existing document. Committee members were provided with copies of these sections of the existing plan, and a discussion of each mitigation action ensued. The intent of this discussion was to determine what has been accomplished over the last five years with respect to the mitigation policy within the 2004 update. This discussion also involved making a determination as to whether the 2004 policies and mitigation actions were still applicable. This discussion served as the basis for the development of updated goals, policies, and mitigation actions.
- ▶ October 2009: Draft mitigation objectives and implementing actions were presented to the MAC. Time frames have been assigned to each implementing action based on the perceived difficulty of carrying out a given activity. The results of this effort have been directly translated into the policy section of the document.

On October 28th a public input session was held to provide the public with an opportunity to comment on the update progress. The intent of this session was to provide an overview of the project, and the public was provided an opportunity to comment and ask questions regarding the overall process and plan update. This meeting was advertised in the local newspaper. The meeting was handled as an informational question and answer session. Two (2) members of the public were in attendance. No comments were received from the public at this meeting.

- ▶ January 2010: On January 15, 2010, the final MAC meeting was held to discuss the final issues relating to the update. Subsequent to this date it was determined that a review period would be established in conjunction with the initial NCEM review, to allow adequate time for County, regional agencies, and NCEM review and comment.



- ▶ November 2010: A public hearing was held to solicit feedback on the final draft plan. At this public hearing, an overview of the planning process was provided. The hearing was advertised in the local newspaper twice over a two week period.

The sign-in sheets for all MAC meetings, as well as copies of the advertisement for the publicly advertised meeting, have been provided in Appendix B.

As noted, a draft version of the plan was completed on February 26, 2010, and distributed to MAC members. Additionally, representatives of the following stakeholder offices/organizations were contacted for comments and input: the North Carolina Department of Transportation and the American Red Cross (Caldwell County Chapter). All adjoining counties were made aware that the plan was available for review on the Caldwell County website. No comments were received from these agencies.

Review comments were received from NCEM on March 24, 2010, and revisions were made to the final draft HMP based on these NCEM comments (see Appendix C). The final draft HMP was resubmitted to NCEM on April 21, 2010.

As noted above, the HMP was forwarded to all participating jurisdictions for adoption following receipt of a final letter for approval from NCEM. Prior to adoption, however, a final public hearing was held for the County, as well as all participating jurisdictions, in order to allow the public and the above-identified stakeholder groups the opportunity to make comments on and provide input to the final plan. Public hearing notices and adoption resolutions from these meetings have been provided as Appendix D. The Caldwell County Board of Commissioners adopted the HMP on November 1, 2010. The updated HMP received FEMA approval on December 6, 2010.

F. Authority for HMP Adoption and Relevant Legislation

This HMP Update will be adopted by the Caldwell County Board of Commissioners and the governing bodies of each of the eight (8) participating municipalities under the authorities and police powers granted to county and municipal governments by the North Carolina General Statutes (see N.C.G.S., Chapter 153A).

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

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



- ▶ Public Law 106-390, The Robert T. Stafford Disaster Mitigation Act of 2000, as amended (adopted October 30, 2000); and
- ▶ Interim Final Regulations regarding Hazard Mitigation Planning and the Hazard Mitigation Grant Program at 44 C.F.R. Parts 201 and 206 as published in the Federal Register: October 1, 2002 (Volume 67, Number 190, Page 61512-61515
- ▶ *"Keeping Natural Hazards from Becoming Disasters: A Mitigation Planning Guidebook for Local Governments"* published in May of 2003 by the NCDEM Hazard Mitigation Section and the Hazard Mitigation Planning Clinic at the Department of City and Regional Planning at the University of North Carolina at Chapel Hill.

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



SECTION 2. COMMUNITY PROFILES

I. CALDWELL COUNTY

A. Location and General Topography

Caldwell County is located in northwestern North Carolina and is bordered by Watauga County to the northwest, Wilkes County to the northeast, Alexander County to the east, Catawba and Burke Counties to the south, and Avery and Burke Counties to the west. It is situated in the foothills of the Blue Ridge Mountains, and eastern portions of the Pisgah National Forest lie within the county's borders. The county contains elevations ranging from 900 feet to 5,964 feet. The county is served by three rivers: Yadkin, Johns, and Catawba. There are currently nine incorporated municipalities in the county: Lenoir, Hudson, Granite Falls, Cedar Rock, Cahah's Mountain, Gamewell, Sawmills, and part of Rhodhiss. See Map 1 (Appendix A) for a regional location map.

B. History

As early as 1771, settlers in the region had petitioned for creation of a new county. In 1791, Caldwell's first industries were located on Gunpowder Creek, near Granite Falls, including the Pierce Iron Forge where gunpowder was manufactured for the patriots. Carved from the counties of Burke and Wilkes, Caldwell County was formed in January, 1841. A bill originally introduced in 1839 had been rejected because a faction within the state legislature wished to form two Democratic counties instead of one Whig county. The bill, which proposed to establish a county from Burke and Wilkes counties to be named Boone County, was reintroduced on November 19, 1840, by Representative Elisha P. Miller. After being read and rejected, the bill was finally passed on December 14, 1840. Confusion over selection of the name for the county ensued, but when it was suggested that the county be named for Dr. Joseph Caldwell, former President of the University of North Carolina and advocate of a public school system and railroad system stretching from Morehead City through the county to Tennessee, the bill was ratified and signed on January 11, 1841.

Throughout the 19th and 20th centuries, Caldwell County developed into a region dominated by the thriving North Carolina furniture industry. Today the furniture industry still maintains a dominant presence in the region along with many new industries that have located in Caldwell County as well.



C. Climate

As Caldwell County is nestled in the foothills of North Carolina, its climate is mild and influenced by its proximity to the mountains. Generally, there are nine months of moderate weather per year in Caldwell County.

The following summarizes annual temperatures for Caldwell County:

Month	Average High	Average Low
January	51.3° F.	27.7° F.
February	54.1° F.	29.3° F.
March	62.2° F.	35.8° F.
April	71.8° F.	43.6° F.
May	79.1° F.	52.4° F.
June	85.3° F.	60.5° F.
July	88.0° F.	64.4° F.
August	86.9° F.	63.5° F.
September	81.8° F.	57.4° F.
October	72.7° F.	45.0° F.
November	62.2° F.	35.3° F.
December	52.8° F.	28.8° F.

Source: Southeast Regional Climate Center.

The maximum average precipitation occurs in August, with 5.06 inches. The county receives approximately 48.83 inches of precipitation annually, and averages 8.7 inches of snowfall annually.



D. Demographic Summary

1. Population

With the exception of the Town of Hudson, all municipalities in Caldwell County experienced an increase in population from 1990 to 2000. The Town of Granite Falls experienced a sizable increase of almost one-fifth from 1990 to 2000. A more detailed discussion of the population data for each municipality is included in the demographic summary sections for individual municipalities which follow this section. Caldwell County, including all its municipalities as well as the unincorporated areas, experienced a 9.5% increase in population from 1990 to 2000. Table 1 details population data for Caldwell County and participating municipalities. (Please note that the entire population of Rhodhiss was included in the data summaries, although the town lies partially in Burke County). The NC Office of State Planning estimated the 2007 population of Caldwell County to be 79,954, a 3.3% increase over the 2000 Census figure of 77,415. This slight overall increasing trend is expected to continue; the Office of State Planning projects the 2012 population for the county to be 82,321, a 3% increase over the 2007 estimate.

Table 1. Caldwell County/Municipalities Population, 1990 to 2007

Municipality/County	Total Population			% Change		
	1990	2000	2007 Estimate	'90-'00	'00-'07	Overall '90-'07
Cajah's Mountain	2,540	2,681	2,729	5.6%	1.8%	7.4%
Cedar Rock	280	314	319	12.1%	1.6%	13.9%
Gamewell	3,431	3,648	3,649	6.3%	0.03%	6.4%
Granite Falls	3,904	4,614	4,936	18.2%	7.0%	26.4%
Hudson	3,094	3,076	3,003	-0.58%	-2.4%	-2.9%
Lenoir	16,278	16,793	16,472	3.2%	-1.9%	1.2%
Rhodhiss	321	362	368	12.8%	1.7%	14.6%
Sawmills	4,689	4,922	5,032	5.0%	2.2%	7.3%
Caldwell County*	70,709	77,415	79,954	9.5%	3.3%	13.1%

* Note that the county total includes all unincorporated areas in addition to the municipalities listed.
 Source: US Census Bureau & NC Office of State Planning.



2. Population Profile - Age

The county's population profile appears to be "aging" slightly from 1990 to 2000, with the Village of Cedar Rock experiencing the largest increase in median age, from 38.1 to 44.1 years. The median age for Caldwell County, which includes the municipalities as well as unincorporated areas, experienced an increase from 34.6 years in 1990 to 38 years in 2000. Table 2, below, provides a detailed breakdown of age composition for the county. A more detailed discussion of age composition follows in the sections under individual municipalities.

Table 2. Caldwell County Age Composition, 1990 and 2000

Age	1990		2000	
	Total	% of Total	Total	% of Total
0 to 14 years	13,602	19.2%	15,282	19.7%
15 to 34 years	22,189	31.4%	20,248	26.2%
35 to 54 years	19,542	27.6%	23,337	30.1%
55 to 64 years	6,827	9.7%	8,289	10.7%
65 to 74 years	5,150	7.3%	5,799	7.5%
75 and over	3,399	4.8%	4,460	5.8%
Total population	70,709	100.0%	77,415	100.0%
Median age	34.6	-	38.0	-
School Age Pop. (5-18)	13,160	18.6%	13,718	17.7%
Working Age Pop. (16-64)	44,449	62.9%	50,740	65.5%
Retired Pop. (65+)	8,549	12.1%	10,259	13.3%

Source: US Census Bureau and NC Office of State Planning.

3. Housing

The number of occupied housing units for the county, as reported in the 2000 Census, was 30,768, or 92% of the total number of housing units. Vacant housing units (2,662) comprise 8% of the total number of units. While 797 of the vacant housing units (29.9%) were reported as being utilized for seasonal, recreational, or occasional purposes, over two-thirds (70.1%) were considered vacant for "other reasons." A significant majority of *occupied* housing units are owner-occupied (74.9%), with rental households accounting for 25.1% of the occupied housing units. Table 3 summarizes housing tenure of residential units within Caldwell County. Summaries of housing unit data for the towns are found in the individual municipalities sections following this section.



Table 3. Caldwell County Housing Units, 2000

	Number	% of Total Units	
Occupied Housing Units	30,768	92.0%	
Owner Occupied	23,053	68.9%	(74.9% of <i>occupied</i> units)
Renter Occupied	7,715	23.1%	(25.1% of <i>occupied</i> units)
Vacant Housing Units	2,662	8.0%	
Vacant for Seasonal, Recreational, or Occasional Use	797	2.4%	(29.9% of <i>vacant</i> units)
Vacant for Other Reasons	1,865	5.6%	(70.1% of <i>vacant</i> units)
Total Housing Units	33,430	100.0%	

Source: US Census Bureau.

4. Economy

Table 4 lists the major types of industries employing Caldwell County workers as of the 2000 Census. The manufacturing industry is the largest employer (43.2%) of Caldwell County workers, with the education, health and social services industry being the second largest employer (13.9% of workers). Manufacturing firms in Caldwell County include Bernhardt Furniture Company, Inc.; Broyhill Furniture Industries, Inc.; Thomasville Furniture Industries, Inc.; Fairfield Chair Company; Kincaid Furniture Company, Inc.; Paxar Americas, Inc.; Chemical Coating, Inc.; Bemis Manufacturing Company; Greer Laboratories; Neptco, Inc.; Sealed Air Corporation; Meridian Automotive Systems; American and Efird, Inc.; and Huffman Finishing Company. Further discussion of economic data for Caldwell County municipalities is located in individual municipalities sections following this section.

Table 4. Caldwell County Workers by Industry, 2000

Industry	# of Workers	% of Workers
Agriculture, forestry, fishing and hunting, and mining	213	0.5%
Construction	2,506	6.3%
Manufacturing	17,198	43.2%
Wholesale trade	1,304	3.3%
Retail trade	4,245	10.7%
Transportation and warehousing, and utilities	2,027	5.1%
Information	427	1.1%
Finance, insurance, real estate, and rental and leasing	980	2.5%
Professional, scientific, management, administrative, and waste management services	1,246	3.1%



Industry	# of Workers	% of Workers
Educational, health and social services	5,536	13.9%
Arts, entertainment, recreation, accommodation and food services	1,538	3.9%
Other services (except public administration)	1,762	4.4%
Public administration	824	2.1%

Source: US Census Bureau.

The median income for Caldwell County as reported in the 2000 Census was \$35,739, slightly more than the \$34,678 median income figure for the nearby City of Morganton, and slightly less than the \$37,236 figure reported for the City of Hickory.



II. TOWN OF CAJAH'S MOUNTAIN

A. Location

The Town of Cajah's Mountain is located in the southern portion of Caldwell County, just southwest of the City of Lenoir. The town is located approximately 6 miles north of the Burke County border, along NC State Road 1001.

B. Demographic Summary

1. Population

The population of Cajah's Mountain as reported in the 1990 US Census was 2,540, with a 5.6% increase occurring between 1990 and 2000, for a total 2000 population of 2,681. The North Carolina Office of State Planning estimated the 2007 population of Cajah's Mountain to be 2,729, demonstrating a slight increase of 1.8% between the years 2000 and 2007. The population is also considered to be aging, since the median age as reported in the 1990 US Census was 35.5 years, and the median age as reported in the 2000 US Census was 39 years. See Table 1, above, for detailed population data for the town. The NC Office of State Planning projects a continuing increasing trend for Cajah's Mountain's 2012 population, which it estimates at 2,781 persons.

2. Housing

The occupancy rate of Cajah's Mountain's housing units is high – 95.5% (996) of the town's housing units are occupied, with only 4.5% (47 units) being vacant, as reported in the 2000 Census. Only two of the vacant units are used for seasonal, recreational, or occasional use. Of the occupied units, 734 units, or 73.7%, are owner-occupied, and 262, or 26.3% of the units, are renter-occupied. The number of housing units (1,043) has increased slightly from the 1990 Census reported figure of 1,005.

3. Economy

The 2000 Census reported that the overwhelming majority of Cajah's Mountain's workers were employed in the manufacturing (42.3%) and the educational, health and social services (19%) industries. Median income for Cajah's Mountain's residents was \$39,566, and less than 10% (8.8%) of Cajah's Mountain's families were considered below poverty level.



III. VILLAGE OF CEDAR ROCK

A. Location

The Village of Cedar Rock is located in the eastern central portion of Caldwell County, approximately 10 miles southwest of the Wilkes County border and 6 miles west of the county's border with Alexander County. The town lies just east of NC Highway 18 and is situated approximately 4 miles northeast of the City of Lenoir.

B. Demographic Summary

1. Population

Cedar Rock's population, as reported in the 1990 US Census, was 280, with a sizeable 12.1% increase occurring between 1990 and 2000, for a total 2000 population of 314. The North Carolina Office of State Planning estimated the 2007 population of Cedar Rock to be 319, demonstrating a slight increase of 1.6% between the years 2000 and 2007. The population is also considered to be aging, since the median age as reported in the 1990 US Census was 38.1 years, and the median age as reported in the 2000 US Census was 44.1 years. See Table 1, above, for detailed population data for the village. The NC Office of State Planning projects a steady increasing trend for Cedar Rock's 2012 population, which it estimates at 324 persons.

2. Housing

Cedar Rock's housing occupancy rate is very high, with 97.6% (123) of the village's housing units being occupied and only 2.4% (3 units) being vacant, as reported in the 2000 Census. None of the vacant units are used for seasonal, recreational, or occasional use. Of the occupied units, 119 units, a significant 96.7%, are owner-occupied, and 4, or only 3.3% of the units, are renter-occupied. The number of housing units (126) has increased only slightly from the 1990 Census reported figure of 122.

3. Economy

The 2000 Census reported that the majority of Cedar Rock's workers were employed in the manufacturing (29.4%) and the educational, health and social services (27%) industries. Median income for Cedar Rock's residents was a substantial \$116,686, and none of Cedar Rock's families were considered below the poverty level.



IV. TOWN OF GAMEWELL

A. Location

The Town of Gamewell is located in the southwestern portion of Caldwell County, approximately 3 miles northeast of the Burke County border, and 3 miles southwest of the City of Lenoir. NC Highway 18 and US Highway 64 converge and run together through town.

B. Demographic Summary

1. Population

The population of Gamewell as reported in the 1990 US Census was 3,431, with a 6.3% increase occurring between 1990 and 2000, for a total 2000 population of 3,648. The North Carolina Office of State Planning estimated the 2007 population of Gamewell to be 3,649, demonstrating a minimal increase of 0.03% between the years 2000 and 2007. The population is also considered to be aging, since the median age as reported in the 1990 US Census was 33.3 years, and the median age as reported in the 2000 US Census was 38.7 years. See Table 1, above, for detailed population data for the town. The NC Office of State Planning projects a continuing increasing trend for Gamewell's 2012 population, which it estimates at 3,687 persons.

2. Housing

The occupancy rate of Gamewell's housing units is relatively high – 92.9% (1,501) of the town's housing units are occupied, with 7.1% (114 units) being vacant, as reported in the 2000 Census. Only six of the vacant units are used for seasonal, recreational, or occasional use. Of the occupied units, 1,193 units, or 79.5%, are owner-occupied, and 308, or 20.5% of the units, are renter-occupied. The number of housing units (1,615) has increased significantly from the 1990 Census reported figure of 1,347 – the 2000 US Census reported that 283 housing units were built between 1990 and 2000 in the Town of Gamewell.

3. Economy

The 2000 Census reported that the overwhelming majority of Gamewell's workers were employed in the manufacturing (45.2%) and the educational, health and social services (18.5%) industries. Median income for Gamewell's residents was \$39,225, and only 7% of Gamewell's families were considered below poverty level.



V. TOWN OF GRANITE FALLS

A. Location

The Town of Granite Falls is located in the southeastern portion of Caldwell County, approximately 1 mile north of the Burke County border and 3 miles west of the Catawba County border. The town is bisected by US Route 321 Alternate.

B. Demographic Summary

1. Population

The population of Granite Falls as reported in the 1990 US Census was 3,904, with a significant 18.2% increase occurring between 1990 and 2000, for a total 2000 population of 4,614. The North Carolina Office of State Planning estimated the 2007 population of Granite Falls to be 4,936, demonstrating an increase of 7% between the years 2000 and 2007. The age of Granite Falls' population has remained relatively steady, with the median age reported in the 1990 US Census being 35.8 years, and the median age reported in the 2000 US Census being 36.5 years. See Table 1, above, for detailed population data for the town. The NC Office of State Planning projects a continuing increasing trend for Granite Falls' 2012 population, which it estimates at 5,191 persons.

2. Housing

The occupancy rate of Granite Falls' housing units is high – 95.1% (1,758) of the town's housing units are occupied, with only 4.9% (91 units) being vacant, as reported in the 2000 Census. Only seven of the vacant units are used for seasonal, recreational, or occasional use. Of the occupied units, 1,135 units, or 64.6%, are owner-occupied, and over one-third of the units (35.4%, 623 units), are renter-occupied. The number of housing units (1,849) has increased from the 1990 Census reported figure of 1,641.

3. Economy

The 2000 Census reported that the majority of Granite Falls' workers were employed in the manufacturing (37.7%) and the educational, health and social services (16%) industries. Median income for Granite Falls' residents was \$38,596, and only 5.7% of Granite Falls' families were considered below poverty level.



VI. TOWN OF HUDSON

A. Location

The Town of Hudson is located in the southeastern portion of Caldwell County, approximately 5 miles north of the Burke County border and 9 miles west of the Alexander County border. The town is situated approximately 1 mile southeast of the City of Lenoir and is bisected by US Route 321 Alternate.

B. Demographic Summary

1. Population

As reported in the 1990 US Census, the population of the Town of Hudson was 3,094, with a 0.58% decrease occurring between 1990 and 2000, for a total 2000 population of 3,076. Hudson was the only town in Caldwell County which experienced a decrease in population from 1990 to 2000. The North Carolina Office of State Planning estimate for Hudson's 2007 population is 3,003, demonstrating a 2.4% decrease between the years 2000 and 2007. The population is also considered to be aging slightly, with the median age reported in the 1990 US Census at 37 years and the median age reported in the 2000 US Census at 39.8 years. See Table 1, above, for detailed population data for the town. The NC Office of State Planning projects a continuing decreasing trend for Hudson's 2012 population, which it estimates at 2,983 persons.

2. Housing

The occupancy rate of Hudson's housing units is relatively high – 94.6% (1,324) of the town's housing units are occupied, with only 5.4% (76 units) being vacant, as reported in the 2000 Census. Twelve of the vacant units (less than 1%) are used for seasonal, recreational, or occasional use. Of the occupied units, 907 units, or 68.5%, are owner-occupied, and 417, or 31.5% of the units, are renter-occupied. The number of housing units (1,400) has increased from the 1990 Census reported figure of 1,278.

3. Economy

The 2000 Census reported that the majority of Hudson's workers were employed in the manufacturing (37.5%) and the educational, health and social services (17.6%) industries. Median income for Hudson's residents was \$35,562, and only 3.7% of Hudson's families were considered below poverty level.



VII. CITY OF LENOIR

A. Location

The City of Lenoir is located in central/southern Caldwell County, approximately 10 miles west of the Alexander County border and seven miles north of the Burke County border. Highways running through the city include US Route 64, US Route 321 and 321A, and NC Highways 18 and 90.

B. Demographic Summary

1. Population

As Caldwell County's largest municipality and the county seat, Lenoir's 1990 population as reported in the US Census was 16,278. The City experienced a slight 3.2% increase between 1990 and 2000, for a total 2000 population of 16,793. The North Carolina Office of State Planning estimated the 2007 population of Lenoir to be 16,472, demonstrating a marginal (1.9%) decrease between the years 2000 and 2007. The population is also considered to be aging slightly, since the median age as reported in the 1990 US Census was 36.7 years, and the median age as reported in the 2000 US Census was 39.4 years. See Table 1, above, for detailed population data for the city. The NC Office of State Planning projects a continuing decreasing trend for Lenoir's 2012 population, which it estimates at 16,440 persons.

2. Housing

The occupancy rate of Lenoir's housing units is relatively high – 92.7% (6,913) of the city's housing units are occupied, with 7.3% (548 units) being vacant, as reported in the 2000 Census. Only twenty-three of the vacant units are used for seasonal, recreational, or occasional use. Of the occupied units, 4,365 units, or 63.1%, are owner-occupied, and 2,548, or 36.9% of the units, are renter-occupied. The number of housing units (7,461) has increased from the 1990 Census reported figure of 7,108.

3. Economy

The 2000 Census reported that the overwhelming majority of Lenoir's workers were employed in the manufacturing (41.3%), the educational, health and social services (14.4%), and the retail trade (12.2%) industries. Median income for Lenoir's residents was \$29,369, and 10.4% of Lenoir's families were considered below poverty level.



VIII. TOWN OF RHODHISS

A. Location

The Town of Rhodhiss, which shares its corporate boundary with Burke County to the south, is located in the southeastern portion of Caldwell County, approximately 9 miles west of the Catawba County border. State Road 1106 runs north-south through the Town of Rhodhiss.

B. Demographic Summary

1. Population

The population of Rhodhiss as reported in the 1990 US Census was 321, with a significant 12.8% increase occurring between 1990 and 2000, for a total 2000 population of 362. The North Carolina Office of State Planning estimated the 2007 population of Rhodhiss to be 368, demonstrating a slight increase of 1.7% between the years 2000 and 2007. The population is also considered to be aging slightly, since the median age as reported in the 1990 US Census was 33.8 years, and the median age as reported in the 2000 US Census was 35.9 years. See Table 1, above, for detailed population data for the town. The NC Office of State Planning projects a continuing increasing trend for Rhodhiss's 2012 population, which it estimates at 374 persons.

2. Housing

The occupancy rate of Rhodhiss's housing units is relatively high – 90.4% (170) of the town's housing units are occupied, with 9.6% (18 units) being vacant, as reported in the 2000 Census. Only five of the vacant units are used for seasonal, recreational, or occasional use. Of the occupied units, 152 units, or 89.4%, are owner-occupied, and 18, or 10.6% of the units, are renter-occupied. The number of housing units (188) has increased from the 1990 Census reported figure of 154.

3. Economy

The 2000 Census reported that the overwhelming majority of Rhodhiss's workers were employed in the manufacturing (54.4%) and the educational, health and social services (15.9%) industries. Median income for Rhodhiss's residents was \$32,875, and only 5.6% of Rhodhiss's families were considered below poverty level.



IX. TOWN OF SAWMILLS

A. Location

The Town of Sawmills is located in the southeastern portion of Caldwell County, approximately 3 miles southeast of the City of Lenoir along US Route 321A.

B. Demographic Summary

1. Population

The population of Sawmills as reported in the 1990 US Census was 4,689, with a 5% increase occurring between 1990 and 2000, for a total 2000 population of 4,922. The North Carolina Office of State Planning estimated the 2007 population of Sawmills to be 5,032, demonstrating a slight increase of 2.2% between the years 2000 and 2007. The population is also considered to be aging somewhat, since the median age as reported in the 1990 US Census was 32.1 years, and the median age as reported in the 2000 US Census was 35.6 years. See Table 1, above, for detailed population data for the town. The NC Office of State Planning projects a continuing increasing trend for Sawmills' 2012 population, which it estimates at 5,153 persons.

2. Housing

The occupancy rate of Sawmills' housing units is high – 95% (1,942) of the town's housing units are occupied, with only 5% (103 units) being vacant, as reported in the 2000 Census. Only seven of the vacant units are used for seasonal, recreational, or occasional use. Of the occupied units, 1,356 units, or 69.8%, are owner-occupied, and 586, or 30.2% of the units, are renter-occupied. The number of housing units (2,045) has increased from the 1990 Census reported figure of 1,847.

3. Economy

The 2000 Census reported that the overwhelming majority of Sawmills' workers were employed in the manufacturing (49.1%) and the educational, health and social services (14.3%) industries. Median income for Sawmills' residents was \$36,391, and only 4.3% of Sawmills' families were considered below poverty level.



SECTION 3. IDENTIFICATION OF POTENTIAL NATURAL HAZARDS

A. Introduction

As part of Caldwell County's hazard mitigation efforts and the preparation of this plan update, the county will need to decide on which specific hazards it should focus its attention and resources. This section of the HMP update identifies and analyzes the hazards facing Caldwell County and its participating jurisdictions by answering the following questions:

- ▶ What are the *types* of natural hazards that threaten the community?
- ▶ What are the *characteristics* of each hazards?
- ▶ What is the *likelihood* of occurrence (or probability) of each hazard?
- ▶ What is the likely *magnitude* of the potential hazards?
- ▶ What are the possible *impacts* of the hazards on the community?

The following section identifies each hazard that poses an elevated threat to Caldwell County. A rating system that evaluates the potential for occurrence for each identified threat is provided (see Table 12). The following natural hazards were determined to be of concern for Caldwell County and its participating municipalities:

1. Wildfire
2. Landslides
3. Flooding
4. Severe Winter Storms
5. Severe Thunderstorms and Windstorms
6. Lightning
7. Tornados
8. Dam/Levee Failure
9. Drought

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



The tables presented within this section as well as Appendix E are the results of this research. Please note that the individual likelihood of occurrence tables included in the 2004 Hazard Mitigation Plan have been removed from each section and are provided in Section 3.N as one table summarizing all hazards affecting the County.

B. Explanation of Hazard Identification

The following table provides an overview of all hazards identified in this HMP update along with a brief description of why and how the hazard was identified.

Table 5. Explanation of Hazards Identified

Hazard	How Identified	Why Identified
Wildfires	Large undeveloped areas of Caldwell County contain remote heavily wooded areas which provide large amounts of materials that frequently cause fires.	Historical records indicate particular areas of Caldwell County are consistently subject to the effects of wildfires.
Landslides	Distinct geologic features in the northern portion of Caldwell County, specifically the Appalachian Mountains, place Caldwell County at an elevated risk for landslides.	Shifts in development patterns have led to substantial development on and along many of the slopes and valleys located in the northern portion of Caldwell County.
Flooding	Using historical events and information from FIRM flood maps a number of areas within Caldwell County have been identified as flood prone areas.	The headwaters of numerous creeks and rivers, as well as the presence of the Catawba River, gives rise to the possibility of additional flooding events.
Severe Winter Storms	Historical meteorological data indicates that Caldwell County almost annually receives significant amount of snow, sleet, and freezing rain.	The effects of Winter Storms on the availability of electricity for warmth and potable water for drinking and cooking during and after such events could have devastating impacts on the citizens of Caldwell County.
Severe Thunderstorms	Throughout the summer and spring months, afternoon thunderstorms appear on a fairly regular basis. The presence of the Appalachian Mountain chain also contributes to thunderstorms created through an orographic type effect.	Airflow patterns and the long-term predictability of severe thunderstorms make these events sudden and often devastating to Caldwell County.
Tornados	This type of meteorological phenomenon most often occurs with the presence of severe thunderstorms. With the frequency of such storms tornados should always be considered a factor.	As with thunderstorms, the unpredictability and sudden onset of tornadic activity often leads to devastating effects on Caldwell County.
Dam Failure	The existence of chain of lakes along the Catawba River, which were created by dam construction, alone gives great concern to the prospect of dam failure.	The failure of either of the two dams located along the Catawba River chain would create flooding on a significant scale.



Hazard	How Identified	Why Identified
Drought	National Oceanic and Atmospheric Administration, NC Drought Management Advisory Council	Although drought effects have not been significant in the past, population growth and continued water resource depletion suggests that this issue is worth monitoring.

C. Wildfire

According to *Forest Statistics for North Carolina, 2002*, published by the USDA - Forest Service, 226,800 acres of the County’s total acreage (301,549 acres) are in forest land. This represents approximately 75.2% of the County.

Large portions of these forest lands within the County remain remote and somewhat inaccessible to emergency personnel and the general public. Vast expansions of the northern portions of Caldwell County are occupied by large undeveloped areas of the Pisgah National Forest. Overall, however, 177,500 acres of the total 226,800 acres of forest lands in the County are in private ownership and as such are susceptible to development. Only 49,300 acres, or 21.7% of forest lands are in ownership of the Federal, State, or county/municipal governments.

Almost annually, wildfires erupt throughout the region. On average, for the period between 2004 and 2008, Caldwell County experienced 134 wildfires per year (see Figure 1). Debris fires, incendiary (i.e., intentionally lit) fires, and fires started by children accounted for well over half of annual fires during this period (72 per year). As population densities spread out into areas surrounding the forest land, citizens and private property increasingly become more susceptible to the effects of wildfires.

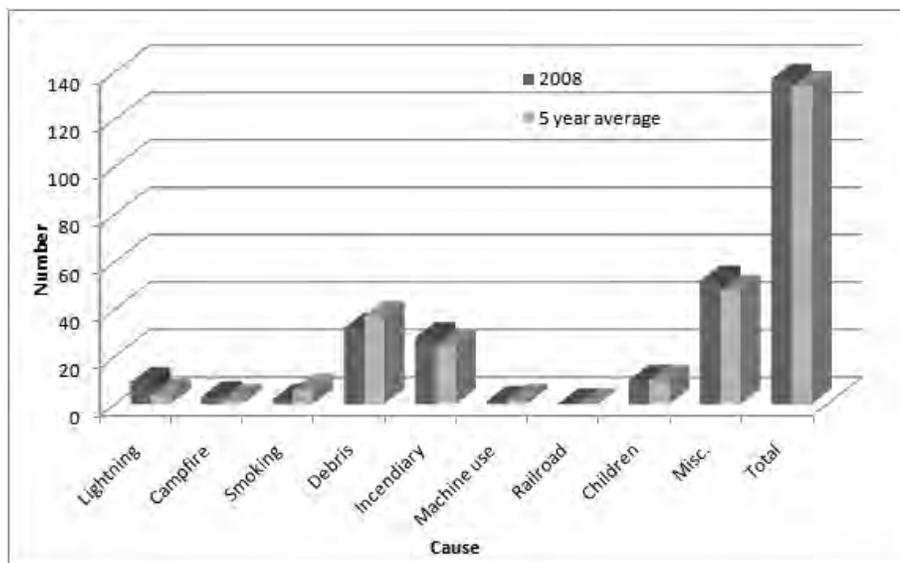


Figure 1. Causes of Wildfires in Caldwell County - Year 2008 and Five-Year Average

Source: NC Division of Forest Resources.



Although the incorporated government jurisdictions in Caldwell County have significantly less forest land within their corporate limits and extra-territorial jurisdictions (ETJs) than in the unincorporated County, the municipal governments' boundaries exist at the "urban/wildland interface" – the area where human development meets undeveloped, forested areas that provide fuel for fires. This "urban/wildland interface" presents the greatest risk to life and property from wildfires.

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, wildfire has an impact rating of moderate and a likelihood of occurrence of highly likely in Caldwell County.

D. Landslides

According to the United States Geological Survey (USGS), landslides are a major geologic hazard that occur in all 50 states. Landslides in the United States cause approximately \$3.5 billion per year (year 2005 dollars) in damage and kill between 25 and 50 people annually. Casualties in the United States are primarily caused by rockfalls, rock slides, and debris flows. Landslides are especially troubling because they often occur with other natural hazards, such as earthquakes and floods.

A deadly manifestation of landslides are debris flows (also referred to as mudslides, mudflows, or debris avalanches), which are a common type of fast-moving landslide that generally occurs during intense rainfall on water-saturated soil. They usually start on steep hillsides as soils slump or slides that liquefy and accelerate to speeds as great as 35 miles per hour or more. They continue flowing down hills and into channels and deposit sand, mud, boulders, and organic material onto more gently sloping ground.

In the eastern United States, landslides are common throughout the mountainous Appalachian region and New England, predominantly from sliding of clay-rich soils. The USGS identifies landslide incidence/susceptibility for the eastern United States by (1) classifying geographic areas by high, medium, or low landslide incidence; and (2) evaluating geologic formations in these areas by high, medium, and low susceptibility to landsliding.

Susceptibility to landsliding is defined by the USGS as the probable degree of response of geologic formations to natural or artificial cutting, loading of slopes, or to unusually high precipitation. Generally, it is assumed that unusually high precipitation or changes in existing conditions can initiate landslide movement in areas where rocks and soils have experienced numerous landslides in the past.



Caldwell County has a category 6 (of 6) susceptibility/incidence classification for landslide hazard based on the U.S. Geological Survey (USGS) Landslide Susceptibility/Incidence scale. This means that the County has a high incidence and a high susceptibility to landslides and that there is a 15 percent or greater chance that the County has been involved in landsliding.

Therefore, the geologic history of Caldwell County alone increases the probability of landslides. As populations increasingly migrate into more mountainous areas of the County, the potential for landslides which affect citizens and private property increases substantially. As citizens begin to construct upon and alter slopes created by tectonic activity, the elements of the slopes which keep them intact may begin to fail. The weight of new structures and the deforestation of the slopes weaken the sub-surfaces of the slopes and such slopes become very fluid-like and often result in slope failure.

For example, on April 11th of 2003, in Caldwell County, U.S. Highway 321 was closed six miles south of the town of Blowing Rock after a landslide carried away the earth beneath about eight feet of the highway's northbound shoulder. Since adoption of the County's 2004 Multi-Jurisdictional Hazard Mitigation Plan, there have been two reported landslides in Caldwell County, one in September of 2004 and another in June of 2005. Both occurrences were the result of heavy rains/flooding.

It should be noted that the most susceptible areas of the County for landslide are generally in Federal government ownership in the Pisgah National Forest and the least susceptible areas (in general) are in the incorporated municipalities of Caldwell County. A more detailed discussion of this topic follows in Section 5 of this plan (Vulnerability Analysis).

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, landslides have an impact rating of moderate and a likelihood of occurrence of likely in Caldwell County.

E. Flooding

Caldwell County makes up a large portion of the Catawba River Watershed, and also serves as the origin of many small tributaries that flow downward through the County to the south and east. With the tremendous amount of flowing water sources which traverse the County, it is all but inevitable that flooding will occur.



There are several different types of flooding which have various levels of potential for affecting Caldwell County. These types of flooding are as follows:

- ▶ Riverine Flooding: The most common type of flooding, riverine flooding, occurs when a river or stream overflows its banks. In large rivers, it usually occurs after a serious, large-scale weather event. In streams, this can occur from more localized weather systems.

- ▶ Flash Floods: Flash floods typically encompass a quick rise of high velocity water and large amounts of debris. Factors that contribute to flash flooding include the length and intensity of rain and the steepness of watershed and stream gradients. Other factors influencing flash floods include the amount of watershed vegetation, natural and artificial water storage, and the configuration of the streambed and floodplain. Flash floods not only occur from weather systems, but also from a dam failure, or breakup of ice. This type of flood poses the most risk to property and lives. Because of the rapid rise of the water levels, a large percentage of flood deaths occurs from motorists who underestimate the depth and velocity of the floodwaters and attempt to cross flooded areas. This typically occurs when a weather event quickly drops an extensive amount of water. Walls of water from this type of event can reach 15 to 20 feet.

- ▶ Dam Break Floods: Results from structural failures of dams.

- ▶ Local Drainage or High Groundwater Levels: Heavy precipitation from local weather events may produce flooding outside of delineated floodplains. If the local soil cannot handle precipitation through infiltration and runoff, the water may accumulate. During winter, frozen ground and accumulated snow will contribute to this problem. This type of flooding generally occurs in flat and urban areas. High groundwater levels may cause leakage in susceptible basements.

- ▶ Fluctuating Lake Levels: Lake levels can change over a short period of time, over a season, or on a long-term basis. Heavy rain or snow can influence levels. All lakes are susceptible to changes in water level, but the problem seems to occur most often in lakes that are landlocked or have inadequate outlets for maintaining a balance between in and outflow. These types of lakes can fluctuate from 5 to 15 feet over an extended period of time.

With the numerous sources and potentially devastating effects of flooding within the County, flooding should be considered as being high on the list of potential hazards.



Caldwell County and a number of the municipal jurisdictions within the County administer local ordinances that regulate development within designated flood areas. The County also participates in the National Flood Insurance Program that rates areas in the County with regard to susceptibility of flooding.

Despite existing mitigation measures (such as the floodplain management ordinance described above), flooding risk remains high in Caldwell County. From 1994 to 2003, the County suffered 24 flooding events reported to the National Climatic Data Center (NCDC). These flooding events produced approximately \$160,000 in property damage and \$50,000 in crop damage. Since adoption of the County’s 2004 Multi-Jurisdictional Hazard Mitigation Plan, the County has experienced 15 flood events (see Table 6).

Table 6. Recent Flood Events in Caldwell County

Location	Date	Type	Property Damage	Crop Damage
Lenoir	5/22/2004	Flash Flood	0	0
Lenoir	6/21/2004	Flash Flood	0	0
County	9/2/2004	Flood	0	0
County	9/7/2004	Flood	25.0 M	5.5 M
County	9/17/2004	Flood	8.2 M	4.0 M
Lenoir	6/7/2005	Flash Flood	15 K	0
Lenoir	6/8/2005	Flash Flood	0	0
Lenoir	7/3/2005	Flash Flood	20 K	0
County	7/4/2005	Flood	0	0
County	7/7/2005	Flood	0	0
County	8/18/2005	Flood	0	0
County	8/18/2005	Flash Flood	0	0
Collettsville	8/26/2008	Flash Flood	0	0
Yadkin Vly	5/16/2009	Flash Flood	0	0
Lenoir	6/10/2009	Flash Flood	20 K	0

Source: National Oceanic and Atmospheric Administration.

Historically, major floods have occurred in Caldwell County in June, 1876; May, 1901; August, 1908; September, 1916; August, 1928; October, 1929; August, 1940; September, 1945; May, 1973; November, 1977; and July, 1989. Of these, the 1916 and 1940 floods were the most devastating. The Northern Caldwell County lumber and mill towns of Edgemont, Mortimer, and Globe were quite literally washed “off the map” by these floods. Because of limited response and assessment capabilities at the time, characterizations of the damage caused by these events is anecdotal, but clearly devastating, almost beyond belief.



A Charlotte *Observer* article from 1988 recollecting the 1916 flood stated that "Walls of water up to 14 feet high washed away homes, factories, bridges, and railroads Over 100 people died." John Hawkins wrote in 1997 of the 1916 flood, "Lenoir was utterly isolated by the flood. All the bridges in and about the county were either washed away or damaged beyond repair ... the entire area was in a sadly devastated condition, with all the year's crops completely destroyed."

Better agricultural management practices, better land use control, better construction practices, and the retirement of the vast majority of highly floodprone land to National Forest usage make the recurrence of flooding of this magnitude unlikely, however.

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, floods have an impact rating of severe and a likelihood of occurrence in Caldwell County.

F. Severe Winter Storms

Geographically, Caldwell County lies within a region historically prone to the effects of large snowstorms, ice storms, and even severe blizzards. These events can and often do produce numerous negative impacts upon the transportation network, power transmission facilities, communications facilities, agricultural commodities, and the health of citizens.

Severe winter storms display themselves in a wide variety of ways including heavy snow, blizzards, freezing rain, ice pellets, and extreme cold. Severe winter storms are extra-tropical cyclones fueled by strong temperature gradients and an active upper-level jet stream. The storms that hit North Carolina usually form in the Gulf of Mexico or off the southeast Atlantic Coast. In North Carolina, very few of these result in a blizzard.

Snow and ice storms are very common, with 55 incidents recorded from 1993 to 2003, resulting in a conservative estimate of \$15 million in property damage. Since adoption of the County's 2004 Multi-Jurisdictional Hazard Mitigation Plan, there have been an additional 44 incidences of severe winter weather recorded (see Appendix E). These events resulted in approximately \$237,000 in property damage and \$1 million in crop damage.

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, severe winter storms have an impact rating of severe and a likelihood of occurrence of likely in Caldwell County.



G. Severe Thunderstorms and Windstorms

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

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

Damage to property from direct or indirect lightning can take the form of an explosion or a burn. Damage to property has increased over the last 35 years. This increase is probably due to increased population. The National Weather Service recorded 19,814 incidents of property damage between 1959 and 1994. Yearly losses are estimated at \$35 million by the National Weather Service. This amount is compiled from newspaper reports, but many strikes are not reported. Lightning causes an average of between 55 and 60 fatalities and 300 injuries per year. Between 1995 and 2008, there were 648 fatalities in the United States attributed to lightning strikes. The National Lightning Safety Institute estimates US lightning costs and losses between \$5 and \$6 billion per year. This information is compiled from insurance reports and other sources that keep track of weather damages. Refer to Section 3.H for further information on lightning strikes.

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

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



Downbursts appear to strike at a central point and blow outward. (Picture a bucket of water dashed against grass. If it hits straight on, the grass will be flattened in a circular pattern. If it hits at an angle, the grass will be flattened in a teardrop pattern). Downbursts resulted in 268 deaths and 8 related accidents between 1974 and 1982.

Downbursts can be further classified into two categories:

- ▶ Microburst: Less than 2 ½ miles wide at the surface, duration less than 5 minutes and winds up to 146 miles per hour.
- ▶ Macroburst: Greater than 2 ½ miles wide at the surface, duration of 5-30 minutes with winds up to 117 miles per hour.

Caldwell County is extremely susceptible to thunderstorms and windstorms, suffering 74 such events from 1955 to 2003. Although statistics regarding deaths, injuries and property damage are only available on a regional basis, these storms have caused three deaths, 10 injuries and over \$17 million in property damage regionally. Additionally, the County suffered 29 hail events from 1974 to 2003. Since adoption of the County's 2004 Multi-Jurisdictional Hazard Mitigation Plan, there have been 31 thunderstorms/ windstorms and 30 hail events resulting in one injury and approximately \$1,930,000 in property damages (see Appendix E).

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, severe thunderstorms and windstorms have an impact rating of severe and a likelihood of occurrence of highly likely in Caldwell County.

H. Lightning

Inside of clouds are small particles known as "hydrometeors". As these particles grow and interact, the collisions cause them to become charged. After studying these particles, researchers believe that the smaller particles tend to become positively charged while the larger particles become negatively charged. Gravity pulls the larger, negatively charged particles downward, and updrafts tend to send the smaller, positively charged particles upward. The result is that the higher portion of the cloud has a net positive charge while the lower portion of the cloud has a net negative charge. The separation of particles causes a large electrical potential not only within the cloud itself, but also between the cloud and the earth. This electrical potential can become millions of volts in magnitude. Eventually, the electrical resistance in the air breaks down and lightning, the electrical discharge between the regions of the cloud or between the cloud and the ground, is formed.



Lightning is generally associated with other weather events outlined throughout this section. It is being discussed independently as there are specific measures that may be taken to mitigate the adverse impacts of lightning strikes. Historical data related to lightning occurrences within Caldwell County has been provided, but these events may also be associated with other weather events listed throughout this section. From 1997 to 2004, there were four lightning strikes in Caldwell County resulting in approximately \$100,000 in property damage.

Since adoption of the County’s 2004 Multi-Jurisdictional Hazard Mitigation Plan, there have been several lightning storms within Caldwell County resulting in eight injuries and approximately \$20,000 in property damages (see Table 7).

Table 7. Caldwell County Lightning Storms, 2004-2009

Location	Date	Deaths	Injuries	Damages (Property)
Lenoir	8/24/2004	0	0	0
Lenoir	6/27/2008	0	8	0
Granite Falls	7/13/2008	0	0	20K

Source: National Oceanic and Atmospheric Administration.

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, lightning has an impact rating of moderate and a likelihood of occurrence in Caldwell County.

I. Tornadoes

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

The path of a tornado is generally less than 0.6 mile wide. The length of the path ranges from a few hundred yards to dozens of miles. A tornado will rarely last longer than 30 minutes. The combinations of conditions that cause tornadoes are common across the southern U.S. in early spring, especially in April and May. Tornadoes have been reported lifting and moving objects weighing more than 300 tons up to 30 feet in the air. They can also lift homes off their



foundations and move them 300 feet. They collect an incredible amount of debris, which they can be projected outward at high velocities. Typically, tornados are accompanied by heavy rain.

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

The intensity, path length, and width of tornados are rated according to a scale originally developed by T. Theodore Fujita and Allen D. Pearson in 1971. At the time Fujita derived the scale, little information was available on damage caused by wind, so the original scale presented little more than educated guesses at wind speed ranges for specific tiers of damage. Further research suggested that wind speeds for strong tornados on the Fujita scale were greatly overestimated, and on February 1, 2007, the Fujita scale was decommissioned (in the US only) in favor of what scientists believe is a more accurate Enhanced Fujita (EF) Scale. The EF Scale is thought to improve on the F-scale on many counts – it accounts for different degrees of damage that occur with different types of structures, both man-made and natural. The expanded and refined damage indicators and degrees of damage standardize what was somewhat ambiguous. It also is thought to provide a much better estimate for wind speeds, and sets no upper limit on the wind speeds for the strongest level, EF5. The Enhanced Fujita Scale is provided in Table 8.

Table 8. Enhanced Fujita Tornado Scale

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



Category	Wind Speed	Equivalent Saffir-Simpson Scale	Potential Damage
EF5	>200 mph	N/A	Explosive Damage: Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 300 feet; steel reinforced concrete structures badly damaged; high-rise buildings have significant structural deformation.

Source: National Oceanic and Atmospheric Administration.

A total of six tornado events have been documented by the National Climatic Data Center in Caldwell County since 1973, resulting in two injuries and approximately \$1.7 million in property damage (see Table 9). There have been no documented tornado occurrences since the 2004 Multi-Jurisdictional Hazard Mitigation Plan was adopted.

Table 9. Recorded Tornadoes in Caldwell County since 1973, with estimated magnitudes and damages

Location	Date	Type	Magnitude	Death	Injury	Property Damage
1 Caldwell County	05/27/1973	Tornado	F1	0	0	25K
2 Caldwell County	04/04/1974	Tornado	F2	0	0	250K
3 Caldwell County	07/09/1977	Tornado	F0	0	0	25K
4 Caldwell County	05/05/1989	Tornado	F2	0	0	250K
5 Dudley Shoals	08/16/1994	Tornado	F0	0	0	50K
6 Dudley Shoals	05/07/1998	Tornado	F4	0	2	1.1M

Source: National Oceanic and Atmospheric Administration.

In conclusion, tornadoes represent a significant threat to Caldwell County due primarily to their relative frequency and large impact.

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, tornadoes have an impact rating of moderate and a likelihood of occurrence of possible in Caldwell County.

J. Dam/Levee Failure

A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. This term is roughly synonymous with the term "levee" and these terms will be used interchangeably in this document.



Dams provide tremendous benefits, including water supply for drinking, irrigation and industrial use, flood control, hydroelectric power, recreation and navigation. At the same time, however, dams also represent a great risk to public safety, the environment and local and regional economies when they fail. Dam failure is the collapse, breach or other failure of a dam resulting in downstream flooding. Historically, some of the largest disasters in the United States have resulted from dam failures. In 1889, 2,209 lives were lost when the South Fork Dam failed above Johnstown, Pennsylvania. The 1928 St. Francis Dam failure killed 450. During the 1970's, the failures of the Buffalo Creek Dam in West Virginia, Teton Dam in Idaho, and the Toccoa Falls Dam in Georgia collectively cost 175 lives and more than \$1 billion in losses. Such dam failures as Silver Lake Dam in Michigan in 2003 (\$100 million in damages and economic losses of \$1 million per day) and the Big Bay Lake Dam in Mississippi in March 2004 (100 homes destroyed) are current reminders of the potential consequences of unsafe dams.

In 1994, the Federal Emergency Management Agency (FEMA) and the U.S. Army Corps of Engineers (USACE) sponsored a National Inventory of Dams (NID) and, through working with State dam safety officials, assigned each dam a downstream hazard classification based on the potential for loss of life and damage to property should the dam fail. This NID is updated yearly by FEMA with USACE funds and the assistance of state regulators.

The three classifications of dams identified by the NID are "high-hazard", "intermediate hazard" and "low hazard". High hazard dams are those dams whose failure would cause loss of human life and significant property damage. As of 2006, North Carolina has 1,148 "high hazard" dams – the largest number of "high hazard" dams in the United States. Another 764 dams in the State are classified as "intermediate hazard", meaning that significant property damage would occur in the event of a dam failure.

Dams in North Carolina are regulated under the Dam Safety Law of 1967 (NCGS 143-215.24), which authorizes the implementation of a dam inspection and certification program in the interest of public health, safety and welfare. The dam inspection and certification program is administered by the Dam Safety Program (DSP) of the Division of Land Resources, N.C. Department of Environmental and Natural Resources (DENR). Each year the DSP performs about 2,000 inspections and identifies an average of 100 dams exhibiting conditions that could lead to failures. These dams are called "unsafe" dams, which mean that they have deficiencies that leave the dam susceptible to failure. Most "unsafe" dams are also "high-hazard" dams.

Dams are dynamic structures that experience both internal and external changes in their conditions as they age. Old pipes deteriorate and development in a watershed causes more runoff that can result in the overtopping of dams. Large storm events, such as hurricanes or severe thunderstorms, can overwhelm a dam's ability to function properly. For example, 40 dams failed



in North Carolina following Hurricane Floyd in September of 1999 and over 100 dams overtopped, causing property damage and requiring evacuation of downstream areas to avoid injury and the loss of life.

It does not take a hurricane, however, for a dam to fail. About six dams a year (on average) fail in North Carolina, for a variety of reasons. While engineering explanations, such as hydraulic, geotechnical or structural conditions can answer the question of why dams fail, most dam failures occur because the owners of the dams do not have the financial means to address dam maintenance and repair. Repairs to dams are very costly, averaging \$500,000 for required repairs to each dam classified as "unsafe." If financial resources were available to dam owners to perform repairs on dams, the risk of failure posed by these dams would be reduced. This need for financial resources is becoming more important, as the population of North Carolina has increased by approximately 20% in the past decade, resulting in more people living in areas that can be impacted by dam failures.

In conclusion, the growing number of dams, the aging of the dams, and the significant increase in population exposed to consequences of dam failure mean that the risk to citizens of North Carolina from dam failure is increasing.

The entire southern border of Caldwell County is traversed by the Catawba River. During the 1950s a series of dams were constructed along the Catawba River in an effort to harness hydroelectric power. The two specific lakes that border Caldwell County to the south are Lake Rhodhiss to the southwest and Lake Hickory to the southwest. The downstream dam of Lake Rhodhiss is of specific concern to the County. The dam containing Lake Hickory is located a number of miles downstream in Catawba County. Failure of the dam containing Lake Rhodhiss would almost certainly negatively result in catastrophic damage to life and property within Caldwell County. As of August 2009, the NC Dam Inventory lists 34 dams in Caldwell County, of which 12 are classified as "high hazard" dams (see Table 10).

Table 10. Dams In or Affecting Caldwell County

State ID Code	Dam Name	River or Stream	Dam Status	Hazard Potential
CALDW-001	Sims Pond Dam	Upper Little River-Tr	Impounding	Intermediate
CALDW-002	Rauchfuss Lake Dam	Church Branch	Impounding	Intermediate
CALDW-003	Lenoir Water Supply Dam	Zacks Fork Creek-Tr	Breached	High
CALDW-004	Little River Dam	Upper Little River	Impounding	Low
CALDW-005	Shufford Mills Pond Dam	Upper Little River	Impounding	Low
CALDW-006	Amick Pond Dam	Lower Creek-Os	Impounding	Low
CALDW-007	Benfield Dam	Angley Creek-Os	Impounding	Intermediate



State ID Code	Dam Name	River or Stream	Dam Status	Hazard Potential
CALDW-008	Omni Supply Dam	Yadkin River	Impounding	Intermediate
CALDW-009	Taylor Pond Dam	Kings Creek-Tr	Impounding	Low
CALDW-010	Clement Dam	Cedar Creek	Impounding	High
CALDW-011	Broyhill Estate Dam	Lower Creek-Tr	Impounding	Low
CALDW-012	Moose Pond Dam	Lower Creek-Tr	Impounding	Low
CALDW-013	Palmer Pond Dam	Groundnut Creek-Tr	Impounding	Low
CALDW-014	Powell Pond Dam	Zacks Fork-Os	Impounding	Intermediate
CALDW-015	Looper Pond Dam	Silver Creek	Impounding	Low
CALDW-016	Fox Lake Dam	Celia Creek-Tr	Impounding	High
CALDW-017	Girl Scout Pond Dam	Ginger Creek-Tr	Impounding	High
CALDW-018	Poplar Lake Dam	Little Gunpowder Creek-Tr	Impounding	Intermediate
CALDW-019	Green Mtn Camp Dam Lower	Fork Creek-Tr	Impounding	High
CALDW-020	High Lake Dam	Zacks Fork Creek-Tr	Impounding	High
CALDW-021	Globe City Campground	Johns River-Os	Exempt	Low
CALDW-022	Harrison Pond Dam	Rock Creek-Os	Impounding	Low
CALDW-023	Goldstein Pond Dam	Mine Branch-Tr	Breached	Low
CALDW-024	Old Mill Lake Dam	Gunpowder Creek	Impounding	High
CALDW-025	Little Dam	Gunpowder Creek	Exempt-FERC	High
CALDW-026	Carol Setzer Dam	Abingdon Creek-Tr	Impounding	Low
CALDW-027	Cantellmo Dam	Lower Creek-Tr	Impounding	Low
CALDW-028	Lewis Faw Dam - Breached	Warrior Creek-Tr	Breached	High
CALDW-029	Dallas Clark Dam	Coffey Creek	Breached	High
CALDW-030	Anchors Landing Lower	Gunpowder Creek-Tr	Impounding	Intermediate
CALDW-031	Broyhill Walking Park Dam	Trib to Lower Creek	Impounding	High
CALDW-032	Silver Creek at Anchors Landing	Silver Creek	Impounding	Low
CALDW-033	Anchors Landing Upper	Gunpowder Creek-Tr	Impounding	Intermediate
CALDW-034	Coffey Dam	House Branch	Drained	High

Source: North Carolina Dam Inventory August 10, 2009, North Carolina Dam Safety Program.

Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, dam/levee failure has an impact rating of moderate and a likelihood of occurrence of possible in Caldwell County.



K. Drought

The National Climatic Data Center has listed 19 drought events in Caldwell County since 1998. Drought has several meanings, but generally, drought reduces the amount of water available for agriculture, municipalities, industry, commerce, tourism, fire suppression, and wildlife. Reduction of electrical power generation and water quality deterioration is likely.

Water shortages in some communities have had dramatic effects on local budgets, revenues, and citizens. Near panic situations among some members of the public, have caused elected officials to spend considerable revenue to assist the public.

By January, 2001, Caldwell County was classified by the US Drought Monitor of North Carolina as being in Extreme Drought. As drought continued in North Carolina into the summer of 2002, it led to a declaration of disaster for agriculture drought. This situation led to funding becoming available for many farmers in the form of Small Business Administration low interest loans. This drought officially ended in 2003, but recurrence of drought conditions is possible.

Drought effects are often severe. Drought can last for extended periods and it affects all citizens, businesses, and government. Caldwell County and its municipalities have the authority to restrict use of certain water resources. These restrictions and how they are imposed are found in local ordinances.

The Drought Monitoring Council was an interagency coordination and information exchange body created in 1992. In 2002, the council did a creditable job monitoring and coordinating drought responses, while increasing public awareness of the council's function and effectiveness. In 2003, the General Assembly recognized the Drought Monitoring Council's leadership and performance by giving them official statutory status and assigning them the responsibility for issuing drought advisories. The council's name was changed to the Drought Management Advisory Council (DMAC) to reflect the broader role of the council, which extends beyond monitoring drought conditions. The drought advisories provide accurate and consistent information to assist local governments and other water users in taking appropriate drought response actions in specific areas of the state that are exhibiting impending or existing drought conditions.

According to the North Carolina Drought Management Advisory Council, there are four categories of drought. From least detrimental to worst, the drought categories are moderate, severe, extreme, and exceptional. State and federal officials use the different drought categories as a barometer to assist local governments and other water users in taking appropriate drought response actions. For instance, drought officials recommend to water users and local governments experiencing moderate drought to minimize non-essential water uses. Non-essential uses include



those that do not have health or safety impacts such as car washing and cleaning streets or sidewalks. However, officials recommend that water users eliminate non-essential water use when areas are experiencing severe drought, a category that is one step worse than moderate drought. Since adoption of the County’s 2004 Multi-Jurisdictional Hazard Mitigation Plan, the entire state of North Carolina has been under varying degrees of drought condition. As late as May 2009, Caldwell County was being impacted by moderate drought conditions according to the NC Drought Management Advisory Council (see Figure 2).

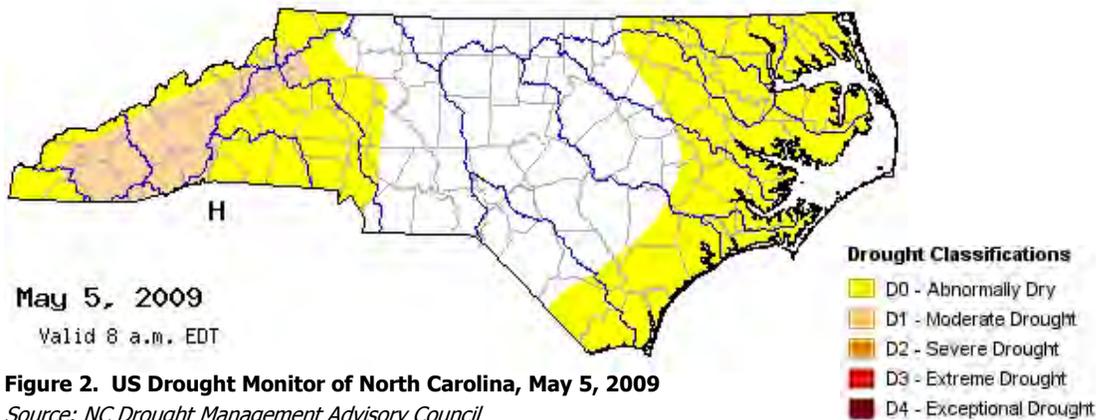


Table 13, on page 3-20, provides a summary of impact for all hazards discussed throughout this plan. According to this analysis, drought has an impact rating of moderate and a likelihood of occurrence of possible in Caldwell County.

L. Explanation of Hazards not Identified

The following table provides an explanation of the hazards which were not identified within the scope of this HMP update.

Table 11. Explanation of Hazards not Identified

Hazard	Why Not Identified
Earthquakes	Although the Brevard Fault traverses the County in a southwest to northeast fashion, it is an inactive fault and is highly unlikely to be a catalyst for significant future seismic activity. Furthermore, mitigation against significant seismic activity is uniformly not cost-effective, given the existing known risk.
Tsunamis	Given the distance between Caldwell County and the Atlantic Ocean, approximately 300 linear miles, the likelihood Caldwell County would feel the effects of such an event are minimal.
Volcanoes	There has been no record of any recent volcanic activities within Caldwell County in recent geologic time.



Hazard	Why Not Identified
Hurricanes	Although Caldwell County may receive latent effects of hurricanes, such as severe thunderstorms, there has been only one major hurricane which has reached Caldwell County in recent history (Hurricane Hugo in 1989).
Coastal Storms	As with Tsunamis, Caldwell County's distance from the Atlantic Ocean greatly diminishes and possibly eliminates Coastal Storms as being a factor of concern.

M. Ranking of Natural Hazard Potential

The hazards outlined within the preceding sections, as well as hazards that have occurred in years prior to 2004 (when the last Hazard Mitigation Plan was prepared), are ranked below based on a score derived from several factors. Each hazard was ranked based on frequency, number of injuries caused, number of resulting deaths, and dollar amount of property damage losses since 1955. These factors have been ranked on a scale of 1 (High) to 9 (Low). The table is organized to display the ranking of each hazard with respect to a given factor. As evidenced by the table, the hazards have been listed in order by total hazard potential. Refer to Appendix E for a listing of natural hazard events by year.

Table 12. Caldwell County Ranking of Hazard Potential

Hazard	Ranking by Frequency	Ranking by Injuries	Ranking by Deaths	Ranking by Property Damage Loss	Total All Factors
Severe Winter Storms	2	2	1	1	6
Severe Thunderstorms/ Windstorms	1	1	2	3	7
Flooding	3	5*	3*	2	13
Lightning	5	3	3*	6	17
Tornados	6	4	3*	5	18
Drought	4	5*	3*	7*	19
Landslides	7	5*	3*	4	19
Dam/Levee Failure	8*	5*	3*	7*	23
Wildfire	8*	5*	3*	7*	23

*Indicates a tie score.

Source: National Oceanic and Atmospheric Administration.



N. Hazard Damage and Likelihood of Occurrence Summary

The following table provides an estimate of damage potential and likelihood of occurrence based on the preceding sections. All factors were taken into account when filling out this table including input from county/municipal staff members, data documenting historical occurrences, and instances of storms impacting the region since the last Hazard Mitigation Plan Update in 2004.

Table 13. Caldwell County Hazard Impact

Type of Hazard & Associated Elements	Likelihood of Occurrence ¹ (Highly Likely, Likely, Possible, Unlikely)	Impact Rating ² (Intensity Scales or Relative Terms)	Potential Impact ³ (Catastrophic, Critical, Limited, Negligible)
Wildfire	Highly Likely	Moderate	Limited
Landslides	Likely	Moderate	Critical
Flooding	Likely	Severe	Catastrophic
Severe Winter Storms	Likely	Severe	Critical
Severe Thunderstorms/ Windstorms	Highly Likely	Severe	Limited
Lightning	Highly Likely	Moderate	Limited
Tornados	Possible	Moderate	Critical
Dam/Levee Failure	Possible	Moderate	Limited
Drought	Possible	Moderate	Limited

NOTES:

¹ Likelihood of occurrence was estimated using historic data and the following chart (based on the 2004 plan):

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

² The hazard’s intensity was estimated using historic data and various standardized scales as outlined in Table 12 Ranking of Hazard Potential. This table provides a composite score of hazard impact and potential based on four factors including: frequency, number of injuries, number of deaths, ranking based on total property damage losses. The classification listed in the table above is based on the following classifications:

- Severe: Hazard potential ranking of 0 to 13
- Moderate: Hazard potential ranking of 14 or greater



³ The potential impact was estimated by considering the magnitude of the event, how large an area within the community is affected, and the amount of human activity in that area, then using the following chart as a tool (based on the 2004 plan):

Level	Area Affected	Impact
Catastrophic	More than 50%	<ul style="list-style-type: none">• Multiple deaths• Complete shutdown of facilities for 30 days or more• More than 50 percent of property is severely damaged
Critical	25 to 50%	<ul style="list-style-type: none">• Multiple severe injuries• Shutdown of critical facilities for 1-2 weeks• More than 25 percent of property is severely damaged
Limited	10 to 25%	<ul style="list-style-type: none">• Some injuries• Shutdown of some critical facilities 24 hours to one week• More than 10 percent of property is severely damaged
Negligible	Less than 10%	<ul style="list-style-type: none">• Minor injuries• Minimal quality-of-life impact• Shutdown of some critical facilities and services for 24 hours or less• Less than 10 percent of property is severely damaged
N/A	Hazard has no discernable impact on the built environment	



SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

This section of the HMP is intended to analyze Caldwell County and its constituent jurisdictions' capacity to address the threats that natural hazards pose to them. This section of the HMP will identify those areas in which the participating jurisdictions are already undertaking positive hazard mitigation efforts that should be supported or enhanced and may also identify areas where their current policies may be worsening hazard risks. In order to achieve these goals, this section contains the following subsections:

- A) Agency/Organizational Review
- B) Existing Policies and Program Review
- C) Legal Capability Review
- D) Fiscal Capability Review
- E) Political Acceptability Review

This section of the plan will provide an overview of organizational capability for the County overall as well as the participating jurisdictions.

- 1) Caldwell County (unincorporated areas)
- 2) Town of Cahah's Mountain
- 3) Village of Cedar Rock
- 4) Town of Gamewell
- 5) Town of Granite Falls
- 6) Town of Hudson
- 7) City of Lenoir
- 8) Town of Rhodhiss
- 9) Town of Sawmills

A. Agency/Organizational Review

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

1. Caldwell County (unincorporated areas)

The County has an elected five (5) member Board of Commissioners with an appointed Chairman. A County Manager and twenty-two (22) County department heads/supervisors, are responsible for day-to-day management and oversight of County business.



Table 14 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the County.

Table 14. Agency/Organization Review for Caldwell County

Area of Responsibility	Description	Contact Person and Telephone
<p>Planning and Zoning (includes building inspections)</p>	<p>The County has adopted ordinances for zoning, subdivision, watershed protection, flood damage prevention, and mobile home park siting, and a ridge law. Administration of these ordinances is conducted by the County's Planning and Development Department. The County has a Comprehensive Land Use Plan originally adopted in 1978 and most recently revised/adopted May 7, 2007.</p> <p>The County also has a fourteen (14) member, appointed Planning Board.</p> <p>Inspections and permitting (building, plumbing, HVAC) for all areas of Caldwell County are administered through Caldwell County Central Permitting/Building Inspections. The full-time staff of the Building Inspections Department inspects all building and structures and work therein for which a permit of any kind has been issued as often as necessary in order to determine whether the work complies with guidelines set forth in the N.C. State Building Codes. The duties of the inspections department include enforcing state and local laws as well as local ordinances within the county's jurisdiction. When deemed necessary by the inspector, materials and assemblies may be inspected at the point of manufacture or fabrication in order to ensure the maintenance of buildings in a safe, sanitary and healthful condition. The responsibilities of the inspectors also include receiving applications for permits, issuing or denying permits and certifications of compliance as well as issuing orders to correct code violations.</p>	<p>Planning Director (828) 396-6362</p> <p>Central Permitting Supervisor (828) 426-8589</p>
<p>Engineering (includes capital improvements plan)</p>	<p>The County Planning and Development Department employs a full-time environmental engineer, but most engineering work is done under contract.</p> <p>The County Finance Officer maintains a five-year capital outlay plan.</p>	<p>County Environmental Engineer (828) 396-1764</p> <p>Finance Director (828) 757-1471</p>



Area of Responsibility	Description	Contact Person and Telephone
Sewer	Sewer provided in areas of the County by the City of Lenoir and the Town of Granite Falls.	Public Works Director City of Lenoir (828) 757-2200 Public Works Coordinator Town of Granite Falls (828) 396-2989
Water	<p>Caldwell County's water distribution network consists of three separate water systems ... the North System in the 321N-Patterson areas; the West System in the Gamewell-Collettsville areas, and the Southeast System in the Kings Creek-Oak Hill-Dudley Shoals-Grace Chapel areas. Each of these three systems has been assigned system identification numbers and operating permits by the North Carolina Department of Environment and Natural Resources, Public Water Supply Section.</p> <p>These systems consist of more than 300 miles of water mains with approximately 8,300 active service connections. Approximately 24,000 of Caldwell County's citizens are served by the county-owned systems. The Southeast System is the largest of the three systems, with approximately 4,800 active connections.</p> <p>The county's water operation is a "Purchase System", meaning that all water is purchased from other entities that own and operate water treatment facilities. This water is sold to the county through contractual purchase agreements and is delivered to the county systems through master-metered points of connection.</p> <p>Caldwell County does not currently own any water treatment facilities, nor does it own capacity in any other entity's facilities. The county purchases its water from three different suppliers -- the City of Lenoir, approximately 82% of the total; the Town of Granite Falls, approximately 15% of the total; and the City of Hickory, approximately 3% of the total. The county has had contractual purchase agreements with the City of Lenoir and the Town of Granite Falls since it began distributing public water in the early 1970's. The county entered a contractual purchase agreement with the City of Hickory (with delivery through the Alexander County water system) in 2002.</p>	Water Program (828) 396-1159



Area of Responsibility	Description	Contact Person and Telephone
Fire	<p>The Fire Marshal's Office is the County's lead agency in fire investigations, helping to determine the cause and origin. The office also investigates all fires where there is serious injury or death.</p> <p>The Fire Marshal's Office provides assistance to the various county fire departments in helping to reduce their I.S.O. ratings; preparation of fire department budgets; consulting with fire departments concerning equipment and training needs; assisting in filing grant applications and fund reimbursement requests, equipment and supply purchases.</p> <p>The office also assists in keeping departments informed on issues dealing with the fire service. prepares and submits BCI files to the proper authorities, and serves as liaison for the departments with county government.</p> <p>The County has a full-time Fire Marshal, a full-time fire inspector, and a full-time assistant.</p>	Fire Marshal/Emergency Management Director (828) 757-1277
Electricity	Provided county-wide by Duke Power, the Blue Ridge Electric Membership Corporation, and the Town of Granite Falls.	Duke Power (800) 578-2236 Blue Ridge EMC (828) 758-2383 Electric Utilities Director Town of Granite Falls (828) 396-2989
Roads/Streets	The County does not own or maintain streets – this function is served by NCDOT and select municipalities.	N/A
Stormwater Management/ Drainage Maintenance	Caldwell County adopted a comprehensive stormwater management program in 2007. This program is administered by the City of Lenoir, and is enforced within the county.	City of Lenoir Planning Department (828) 757-2168
Parks, Greenways, Open Space	The County does not maintain a parks and recreation role – this function is served by individual municipalities and the State and Federal government.	N/A

2. *Town of Cahaj's Mountain*

The Town of Cahaj's Mountain was incorporated in 1983 and is governed by a Mayor and four (4) Council members. Town staff includes a Manager and a Planning Director.



Table 15 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the Town.

Table 15. Agency/Organization Review for the Town of Cajah’s Mountain

Area of Responsibility	Description	Contact Person and Telephone
Planning and Zoning (includes building inspections)	Town has adopted a comprehensive land use plan and ordinances for zoning, subdivision, flood damage prevention and local watershed protection measures. Administration is conducted through contract with the Western Piedmont Council of Governments (WPCOG). WPCOG provides one (1) part-time (one day per week) planner. The Town also has a seven (7) member, appointed Planning Board. Town adheres to County regulations on mobile home siting and set-up. Inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.	Western Piedmont COG (828) 332-9191
Engineering (includes capital improvements plan)	The Town developed a Capital Improvements Plan in March of 2000, and updated in July of 2009, focusing on water and sewer infrastructure extensions.	Town Manager (828) 728-5053
Sewer	Sewer service is currently provided by the City of Lenoir in a limited area of town. A grant was received from the U.S. Department of Agriculture to extend sewer service in town. Town will own and maintain transmission lines and infrastructure, with treatment provided by the City of Lenoir.	Town Manager (828) 728-5053
Water	Water is provided in most areas of town by the Baton Water Corporation and the City of Lenoir.	Baton Water Corporation (828) 728-7003 City of Lenoir (828) 757-2200
Fire	Fire protection provided town-wide by the North Catawba Volunteer Fire Department (V.F.D.)	Fire Chief North Catawba V.F.D. (828) 728-9041
Electricity	Provided town-wide by Duke Power	Duke Power (800) 578-2236
Roads/Streets	Almost all roads/streets are State owned and maintained by the NC Department of Transportation (NCDOT) or are private roads.	NCDOT
Stormwater Management / Drainage Maintenance	Caldwell County adopted a comprehensive stormwater management program in 2007. This program is administered by the City of Lenoir, and is enforced within the Town of Cajah’s Mountain.	City of Lenoir Planning Department (828) 757-2168
Parks, Greenways, Open Space	No Town owned or managed facilities at this time	Town Manager (828) 728-5053



3. Village of Cedar Rock

The Village of Cedar Rock was incorporated in 1997 and is governed by a Mayor and five (5) Council members. Town staff includes a Village Clerk.

Table 16 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the Village.

Table 16. Agency/Organization Review for the Village of Cedar Rock

Area of Responsibility	Description	Contact Person and Telephone
Planning and Zoning (includes building inspections)	The Town has adopted a Zoning ordinance (March, 2000) and administers this ordinance itself through the Village Council. Inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.	Mayor (828) 757-4545
Engineering (includes capital improvements plan)	As needed, under contract.	N/A
Sewer	None – privately owned and maintained septic systems only.	N/A
Water	Provided village-wide by Caldwell County	Caldwell County (828) 396-1159
Fire	Fire service provided by Kings Creek Volunteer Fire Department (V.F.D.)	Chief Kings Creek V.F.D. (828) 758-2017
Electricity	Provided village-wide by Duke Power	Duke Power (800) 578-2236
Roads/Streets	The Village owns and maintains all roads, except NC Highway 18 (NCDOT road). Maintenance oversight provided by Village Council which hires paving/maintenance contractors. Village received \$10,959.65 in NC Powell Bill monies for road maintenance in fiscal year 2009.	Mayor (828) 757-4545
Stormwater Management/ Drainage Maintenance	As needed, under contract from Village Council.	Mayor (828) 757-4545
Parks, Greenways, Open Space	No Village owned or managed facilities at this time	George S. Robinson Mayor, Cedar Rock (828) 757-4545



4. *Town of Gamewell*

The Town of Gamewell was incorporated in 1981 and is governed by a Mayor and five (5) Council members. Town staff includes a Town Administrator.

Table 17 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the Town.

Table 17. Agency/Organization Review for the Town of Gamewell

Area of Responsibility	Description	Contact Person and Telephone
Planning and Zoning (includes building inspections)	Town has adopted ordinances for zoning, subdivision regulation, flood damage prevention and local watershed protection measures. Administration is conducted through contract with the Western Piedmont Council of Governments (WPCOG). WPCOG provides one (1) part-time (1/2 day per week) planner. The Town also has an appointed Planning Board. Town adheres to County regulations on fire and solid waste. Inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.	Town Administrator (828) 754-1991
Engineering (includes capital improvements plan)	As needed, under contract – no town staff.	Town Administrator (828) 754-1991
Sewer	Sewer service is currently provided by the Town in a limited area (down 18/64, up Rocky Road [including the Cloverdale subdivision] and in the southwest of town). Transmission lines owned and maintained by town with treatment provided by the City of Lenoir.	Town Administrator (828) 754-1991
Water	Water is provided in most areas of the Town by Caldwell County.	Caldwell County Public Works Department (828) 396-6949
Fire	Fire protection provided by the Gamewell Volunteer Fire Department (V.F.D.)	Gamewell V.F.D. (828) 758-2581
Electricity	Provided town-wide by Duke Power	Duke Power (800) 578-2236
Roads/Streets	Almost all roads/streets are State owned and maintained by the NC Department of Transportation (NCDOT) or are private roads.	NCDOT



Area of Responsibility	Description	Contact Person and Telephone
Stormwater Management / Drainage Maintenance	Caldwell County adopted a comprehensive stormwater management program in 2007. This program is administered by the City of Lenoir, and is enforced within the Town of Gamewell.	City of Lenoir Planning Department (828) 757-2168
Parks, Greenways, Open Space	Town maintains a small park and walking trail behind Gamewell Elementary (owned by the County). The Town is building a park with PARTF funds, to be completed in 2010, which will include a walking trail, tennis court, basketball court, picnic shelter, and playground equipment.	Town Administrator (828) 754-1991

5. *Town of Granite Falls*

The Town of Granite Falls was incorporated in 1899 and is governed by a Mayor and six (6) Council members. Town staff includes a Town Manager, Clerk, Purchasing Agent, Tax Collector, Public Works Director, Police Chief, Fire Chief, Planning Director, Director of Electric Systems, Sewer Service Superintendent, Water Superintendent, Streets Superintendent, and Recreation Director.

Table 18 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the Town.

Table 18. Agency/Organization Review for the Town of Granite Falls

Area of Responsibility	Description	Contact Person and Telephone
Planning and Zoning (includes building inspections)	Town has adopted a comprehensive land use plan and ordinances for zoning, subdivision, flood damage prevention and local watershed protection measures. Administration of these ordinances is conducted by a full-time Town Planner with contract assistance from private consultants and the Western Piedmont Council of Governments (WPCOG) when necessary. The Town also has a seven (7) member, appointed Planning Board. Except for zoning permits, which are issued by the Town, inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.	Town Planner (828) 396-3131
Engineering (includes capital improvements plan)	As needed, under contract – no town staff. The Town developed a Capital Improvements Plan for the Town in September of 2001, with a revision in March of 2006, focusing on water and sewer infrastructure extensions.	Public Works Director (828) 396-2989



Area of Responsibility	Description	Contact Person and Telephone
Sewer	The Town owns and operates a 900,000 gallon per day wastewater treatment plant (WWTP) and approximately 44 miles of collection lines, serving approximately 2,088 customers. The WWTP is at approximately 52% of capacity.	Public Works Director (828) 396-2989
Water	The Town owns and operates a 2.5 million gallon per day water treatment plant (WTP) and approximately 55 miles of distribution lines, serving approximately 2,250 customers. The WTP is at approximately 48% of capacity.	Public Works Director (828) 396-2989
Fire	<p>The Town of Granite Falls Fire Department (GFFD) serves properties within the Town Limits and the South Caldwell Fire District.</p> <p>The GFFD has a paid staff of 6 fire fighters with up to 32 volunteers. The GFFD operates under an Insurance Service Office (ISO) rating of 5 (on a scale of 1-10) and owns and operates two pumpers, one pumper tanker, and one ladder truck.</p>	Fire Chief (828) 396-2379
Electricity	The Town of Granite Falls operates a twelve kilo-volt (12KV) electric distribution system with five full-time employees. The system is comprised of 65 miles of distribution line and serves 2,418 customers. The Town obtains power primarily from the Catawba Nuclear Power Plant in South Carolina, of which it is a partial owner with 18 other western NC cities that produce and distribute their own electricity.	Electric Utilities Director (828) 396-2989
Roads/Streets	The Town has approximately 34.27 miles of Town-maintained streets – almost all paved. New, dedicated town-owned and maintained streets are created when new subdivisions are accepted. The Town received approximately \$100,613 in NC Powell Bill monies in fiscal year 2009.	Public Works Director (828) 396-2989
Stormwater Management / Drainage Maintenance	Caldwell County adopted a comprehensive stormwater management program in 2007. This program is administered by the City of Lenoir, and is enforced within the Town of Granite Falls.	City of Lenoir Planning Department (828) 757-2168
Parks, Greenways, Open Space	The Town owns and operates a number of recreational facilities, including a gymnasium, three ball fields, five tennis courts and one outdoor basketball court. The Town also owns a ½ mile long paved walking trail and two neighborhood parks.	Recreation Director (828) 396-4454



6. *Town of Hudson*

The Town of Hudson Falls was incorporated in 1905 and is governed by a Mayor and six (6) Council members. Town staff includes a Town Manager, Clerk, Public Works Director, Chief of Police, Garage Superintendent, and Recreation Director.

Table 19 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the Town.

Table 19. Agency/Organization Review for the Town of Hudson

Area of Responsibility	Description	Contact Person and Telephone
Planning and Zoning (includes building inspections)	Town has adopted a Comprehensive Land Use Plan, and ordinances for zoning, subdivision, flood damage prevention and local watershed protection measures. Administration of these ordinances is conducted by a Town Planner hired under contract with the Western Piedmont Council of Governments (WPCOG), 2 days per week. The Town also has an appointed Planning Board. Except for zoning permits, which are issued by the Town, inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.	Town Planner (828) 728-8272
Engineering (includes capital improvements plan)	As needed, under contract – no town staff. No capital improvements plan currently.	N/A
Sewer	Town-wide, provided by the City of Lenoir	City of Lenoir
Water	Town-wide, provided by the City of Lenoir	City of Lenoir
Fire	Service provided town-wide by the Hudson Volunteer Fire Department (V.F.D.)	Chief, Hudson V.F.D. (828) 728-3584
Electricity	Provided town-wide by Duke Power and the Blue Ridge Electric Membership Corporation.	Duke Power (800) 578-2236 Blue Ridge EMC (828) 758-2383
Roads/Streets	The Town Public Works Department has a full-time staff that operates and maintains roadways and roadway right-of-ways in the Town. The Town has approximately 25.81 miles of town-maintained streets. The Town received approximately \$67,732 in NC Powell Bill monies in fiscal year 2009.	Public Works Director (828) 728-8272



Area of Responsibility	Description	Contact Person and Telephone
Stormwater Management / Drainage Maintenance	Caldwell County adopted a comprehensive stormwater management program in 2007. This program is administered by the City of Lenoir, and is enforced within the Town of Hudson.	City of Lenoir Planning Department (828) 757-2168
Parks, Greenways, Open Space	The Town owns a swimming pool, three parks (Hickman, Windmill, and Redwood Parks), a walking and bike path, a recreation center (built in 2008), and offers a number of sporting opportunities for adults and children.	Parks and Recreation Director (828) 728-8272

7. City of Lenoir

The City of Lenoir was incorporated in 1851 and is governed by a Mayor and seven (7) Council members. The City is staffed with a City Manager, Assistant Manager, Clerk, Information Systems Manager, Risk Management Director, Tax Collector, Public Works Director, Chief of Police, Fire Chief, Personnel Director, Planning Director, Economic Development Director, Recreation Director, Sanitation Superintendent, Streets Superintendent, and Sewer Treatment Plant Superintendent.

Table 20 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the City.



Table 20. Agency/Organization Review for the City of Lenoir

Area of Responsibility	Description	Contact Person and Telephone
<p>Planning and Zoning (includes building inspections)</p>	<p>The City has adopted a Comprehensive Land Development Plan and ordinances for zoning, subdivision, flood damage prevention, and mobile home siting. Administration of these ordinances is conducted by the City Planning Director and staff. The City Planning Staff also enforces City regulatory codes, as follows:</p> <ul style="list-style-type: none"> • Grass and Weeds Code • Junked and Abandoned Vehicles Code • Livestock Code • Minimum Housing Code • Trash and Debris Code <p>Finally, the City Planning Staff administers the City's Geographic Information System (GIS).</p> <p>The City also has a ten (10) member, appointed Planning Board.</p> <p>Except for zoning permits, which are issued by the City, inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.</p>	<p>Planning Director (828) 396-3131</p>
<p>Engineering (includes capital improvements plan)</p>	<p>The City Public Works Department oversees all projects with engineering components, but most engineering work is done under contract.</p>	<p>Public Works Director (828) 757-2200</p>



Area of Responsibility	Description	Contact Person and Telephone
Sewer	<p>The City Public Works Department, Wastewater Collection Division, owns and is responsible for maintaining approximately 215 miles of sewer lines throughout the system, which deliver wastewater to Lenoir's two facilities for treatment - Gunpowder and Lower Creek Plants. In addition, the division is responsible for the administration of the Industrial Pretreatment Program and plant monitoring, using a very sophisticated laboratory located at the Lower Creek plant.</p> <p>The Lower Creek Wastewater Treatment plant has been upgraded (1999) to a three-stage advanced nutrient removal process. The capacity is 6.0 million gallons per day, and is currently treating about 2.5 million gallons per day. Also located at this plant is the EPA award-winning biosolids treatment facility.</p> <p>The Gunpowder Creek Wastewater Treatment Plant is an advanced Sequential Batch Reactor (SBR) wastewater treatment facility serving the City of Lenoir and surrounding area. Its capacity is 2.0 million gallons per day, and it is treating an average of .9 to 1.1 million gallons a day.</p>	Public Works Director (828) 757-2200
Water	<p>The City Public Works Department, Water Distribution Division, is responsible for the delivery of potable water to water users and surrounding municipalities via a network of approximately 219 miles of water distribution lines.</p> <p>The City's water intake and treatment facility at Lake Rhodhiss can deliver as much as 12 million gallons of water a day to the citizens of Lenoir and the surrounding municipalities that purchase water. The current average daily flow is approximately 6.5 million gallons of water per day. The facility is a conventional treatment plant utilizing coagulation, flocculation, sedimentation, filtration, fluoridation, disinfection, odor control, and pH adjustment processes.</p>	Public Works Director (828) 757-2200
Fire	The City of Lenoir Fire Department (L.F.D.) has two stations sixty-four paid full-time personnel. L.F.D. is responsible for fire suppression, fire prevention, medical and rescue and hazardous materials operations. L.F.D. has 4 pumper trucks, a rescue company and 2 aerials.	Fire Chief (828)-757-2191
Electricity	Provided town-wide by Duke Power and the Blue Ridge Electric Membership Corporation.	Duke Power (800) 578-2236 Blue Ridge EMC (828) 758-2383



Area of Responsibility	Description	Contact Person and Telephone
Roads/Streets	The Public Works Department, Street/Traffic Division are responsible for ownership and maintenance of approximately 121.57 miles of paved and 2.64 miles of unpaved streets, and provides support for the state maintained streets as well as construction management of newly constructed streets and highways. The Town received approximately \$378,067 in NC Powell Bill monies in fiscal year 2009.	Streets Supervisor (828)757-2174
Stormwater Management / Drainage Maintenance	Caldwell County adopted a comprehensive stormwater management program in 2007. This program is administered by the City of Lenoir and is enforced in the City as well.	Planning Director (828) 396-3131 Public Works Director (828) 757-2200
Parks, Greenways, Open Space	A full-time staff administers eight facilities, including a gymnasium and four parks.	Parks and Recreation Director (828) 757-2188

8. *Town of Rhodhiss*

The Town of Rhodhiss was incorporated in 1903 and is governed by a Mayor and four (4) Commissioners. Town staff includes a Town Manager, Public Works Director, Chief of Police, and a Fire Chief.

Table 21 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the Town.

Table 21. Agency/Organization Review for the Town of Rhodhiss

Area of Responsibility	Description	Contact Person and Telephone
Planning and Zoning (includes building inspections)	The Town has adopted ordinances for subdivision regulation, flood damage prevention, and local watershed protection measures. Administration of these ordinances is handled by the Town Manager. Inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.	Town Manager (828) 396-8400
Engineering (includes capital improvements plan)	As needed, under contract – no town staff.	Town Manager (828) 396-8400



Area of Responsibility	Description	Contact Person and Telephone
Sewer	Sewer service is provided by the Town to 397 customers. Septic tanks provide the other means of sewage disposal for the remaining few customers.	Town Manager (828) 396-8400 Public Works Supervisor (828) 312-0082
Water	Water is provided town-wide and is purchased from the Town of Granite Falls, Burke County, and the Icard Township.	Town Manager (828) 396-8400 Public Works Supervisor (828) 312-0082
Fire	Fire protection is provided by the 23-member Rhodhiss Volunteer Fire Department.	Assistant Fire Chief (828) 396-2942
Electricity	Provided town-wide by Duke Power.	Duke Power (800) 578-2236
Roads/Streets	The Town owns and maintains approximately 8.52 miles of streets, and provides support for the state maintained streets as well as construction management of newly constructed streets and highways. The Town received approximately \$20,592 in NC Powell Bill monies in fiscal year 2009.	Town Manager (828) 396-8400 Public Works Supervisor (828) 312-0082
Stormwater Management / Drainage Maintenance	As needed, under contract from Board of Commissioners	Town Manager (828) 396-8400
Parks, Greenways, Open Space	The Town owns and maintains a small park containing playground equipment, climbing apparatus, and picnic shelters.	Town Manager (828) 396-8400

9. *Town of Sawmills*

The Town of Sawmills was incorporated in 1988 and is governed by a Mayor and five (5) Council members. Administrative and other staff consists of a Town Administrator, Assistant Administrator, Clerk, Finance Director, and Public Works Director.

Table 22 below provides an overview of offices, organizations and agencies responsible for hazard control and hazard mitigation activities in the Town.



Table 22. Agency/Organization Review for the Town of Sawmills

Area of Responsibility	Description	Contact Person and Telephone
Planning and Zoning (includes building inspections)	Town has adopted ordinances for manufactured home parks, zoning, subdivision, flood damage prevention and local watershed protection measures. Administration is conducted through the Town Manager's office. The Town also has an appointed Planning Board. Except for the Town-issued zoning permit, inspections and permitting (building, plumbing, HVAC) are administered through Caldwell County.	Town Manager (828) 396-7903
Engineering (includes capital improvements plan)	As needed, under contract – no town staff. No capital improvements plan currently.	N/A
Sewer	Sewer service is provided by the Town of Sawmills to approximately 400 of 2200 customers. Septic tanks provide the other means of sewage disposal.	Public Works Director (828) 396-2989
Water	Water is provided in most areas of the town by the City of Lenoir.	Public Works Director (828) 757-2200
Fire	Fire protection services provided by the Sawmills Volunteer Fire Department (V.F.D.).	Chief, Sawmills V.F.D. (828) 396-1567
Electricity	Provided town-wide by Duke Power and the Blue Ridge Electric Membership Corporation.	Duke Power (800) 578-2236 Blue Ridge EMC (828) 758-2383
Roads/Streets	The Town owns and maintains approximately 27.52 miles of streets, and provides support for the state maintained streets as well as construction management of newly constructed streets and highways. The Town received approximately \$95,484 in NC Powell Bill monies in fiscal year 2009.	Public Works Superintendent (828) 396-7903
Stormwater Management / Drainage Maintenance	County adopted a comprehensive stormwater management program in 2007. This program is administered by the City of Lenoir, and is enforced within the Town of Sawmills.	City of Lenoir Planning Department (828) 757-2168
Parks, Greenways, Open Space	The Town owns and maintains 2 parks (Town Park and Connelly Creek Access Park) and has an appointed parks advisory board.	Town Manager (828) 396-7903



B. Existing Policies and Program Review

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

1. Flood Damage and Prevention Ordinance

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

- ▶ All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;
- ▶ All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- ▶ All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- ▶ Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- ▶ All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- ▶ New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
- ▶ On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and,



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

In areas designated as floodways, no encroachments, including fill, new construction, substantial improvements, and other developments shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood.

Implementation responsibility is typically through the Town/City/County Planning Department as a condition of a zoning permit. The following communities participating in this plan are current members of the NFIP: Caldwell County, Cahah's Mountain, Cedar Rock, Gamewell, Granite Falls, Hudson, Lenoir, Rhodhiss, and Sawmills.

2. North Carolina State Building Code

The NC State Building Codes regulate for fire resistance in addition to seismic, flooding, and high wind resilience. These codes are reviewed annually and amended as new requirements and materials are introduced. Building codes apply primarily to new construction or buildings undergoing substantial alteration.

Enforcement at the local level is provided by the Caldwell County Central Permitting/Building Inspections (CPBI) office and extends beyond construction inspections to the advance review of plans. An applicant for a building permit must submit plans to the County CPBI for approval. The CPBI reviews the plans and elects to approve or reject them or to require revisions. Construction cannot begin until local officials confirm that the plans are in accordance with the code.

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

3. Minimum Housing Code

Pursuant to N.C.G.S. 160A-441, some cities and towns have adopted a minimum housing code. The code regulates housing which has been found to be unfit for human habitation due to dilapidation; defects increasing the hazards of fire, accident, or other calamities; lack of ventilation, light, and sanitary facilities; and other conditions which may render a dwelling unit unfit for occupancy.



4. Watershed Protection Ordinance

Pursuant to State law, the County and its constituent jurisdictions administer an overlay zoning district which limits density in areas upstream of water supply intake. This overlay zoning district is implemented primarily to ensure the quality of the County's (and its neighbors') drinking water supply. This overlay zoning district also has the effect, however, of limiting the density and intensity of development in some areas of the Lake Rhodhiss watershed.

5. Ridge Law

North Carolina General Statute 113A-209 prohibits construction of a tall building or structure on any protected ridge after January 1, 1984. Caldwell County is located mostly in the foothills of the Blue Ridge Mountains and contains naturally beautiful mountains whose elevation is less than 3,000 feet, yet those mountains and ridges are 500 feet or more above the elevation of an adjacent valley floor. In concurrence with the aforementioned State law, the County determined that construction of tall buildings or structures on ridges 500 feet or more above an adjacent valley floor could cause unusual problems and hazards to the residents of and to visitors to Caldwell County. Supplying water to and disposing of the sewage from buildings high over the valley floor may infringe on the ground water rights and endanger the health to those persons living at lower elevations. Providing fire protection may be difficult given the lack of water supply and pressure and the possibility that fire will be fanned by high winds. Tall buildings and structures located on ridges are a hazard to air navigation and persons on the ground and detract from the natural beauty of the mountains. For these reasons the County Commissioners applied the State prohibition of tall buildings and structures to mountains and ridges that rise 500 feet or more above an adjacent valley floor.

6. Zoning Ordinance

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



7. Subdivision Ordinance

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

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

The community thus possesses great power (in theory, anyway) to prevent unsuitable development in hazard-prone areas.

8. Mobile Home Park Ordinance

The Caldwell County Building Inspection Department regulates the alteration, maintenance operation and use of mobile home parks within Caldwell County which were lawfully established prior to October 16, 2000, pursuant to a Mobile Home Park Ordinance passed by the County. After the above-referenced date, such parks are prohibited.

This ordinance is designed to accomplish the following specific objectives: a) to further the orderly layout of mobile home parks; b) to secure safety from fire, panic and other dangers; c) to provide adequate light and air; and d) to ensure that facilities for transportation, parking, water, sewage, and yard area are provided for mobile home park residents.

9. Capital Improvements Plan

A capital improvements program is a planned schedule of capital expenditures for physical improvements within a local government's jurisdiction, usually over a five-year period, listed according to priority.



The following tables provide a capability assessment and assessment of existing programs and policies for the unincorporated areas in Caldwell County as well as for each participating jurisdiction in Caldwell County.

Table 23. Community Capability Assessment for Caldwell County Unincorporated Areas

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Comprehensive Land Use Plan (CLUP)	Adopted January 16, 1978; most recent revision May 7, 2007	Adopts goals intended to guide future land use; encourages land use controls that ensure reduction of hazards in urbanizing areas	High, document sets prudent planning objectives for reduction of hazard	None
Zoning Ordinance	Originally adopted February 17, 1986, most recent revision November 18, 2002	Adopts development use, design standards, density and intensity requirements within the County and ETJ and enables the County Planning Department and a zoning board of adjustment to oversee ordinance provisions; encourages "planned unit developments (PUD) /cluster development	High, coordinates zoning districts with land suitability and infrastructure availability and encourages PUD/cluster development	None
Subdivision Ordinance	Adopted in current form September 23, 2002	Specifies procedures for review and approval of subdivision plats and requires design standards for land development and approval of subdivisions	High, requires adequate ditching/ drainage structures and requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas and flood elevations as prerequisite for subdivision	None
Watershed Protection Ordinance	Effective January 1, 1994	Establishes development regulations and enforcement procedures in the WS-IV watershed protection area designated by the State of North Carolina within the County's jurisdiction	High, establishes required buffer areas requirements, low lot densities, encourages cluster development in sensitive watershed protection areas	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Parks / Greenway System	N/A	The County does not maintain a parks and recreation role – this function is served by individual municipalities and the State and Federal government.	Low, since no parks/recreation function exists	None, since Federal government and municipalities provide a large amount of open space in hazard prone areas
Inspections / Permitting	Conducted through Caldwell County Central Permitting / Building Inspections	Ensures compliance with State building code	High, centralized and efficient County-wide system for enforcement of State building code	None
Stormwater Management	Comprehensive Stormwater Management Program, May 7, 2007	Enforces stormwater management within the county; administered by City of Lenoir	High, City of Lenoir conducts ditch/ drainageway maintenance as necessary	None
Flood Damage Prevention Ordinance	Adopted October 4, 1993; most recent revision November 20, 2000	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of Federally backed flood insurance in the Town	High, requires 2 feet of freeboard above Base Flood Elevation (BFE) for all developments in SFHA	None
Capital Improvements Plan	County Finance office maintains a Five-Year Capital Outlay Plan (COP) adopted annually by the Board of Commissioners	Current COP addresses outlays for furniture, equipment and facility improvements, but nothing that would affect natural hazard exposure	High, because planned capital outlays do not adversely effect natural hazard exposure	None



Table 24. Community Capability Assessment for the Town of Cajah’s Mountain

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Comprehensive Land Use Plan (CLUP)	Existing – Adopted March 10, 1998	Contains policies discouraging development of hazard-prone areas, planning and acquiring land for a greenway network, and encouraging low density development, except in areas with adequate infrastructure	High, CLUP provides policy guidance for growth, zoning and infrastructure provision	None
Zoning Ordinance and Watershed Protection Ordinance	Adopted May, 1987; most recent revision on December 2, 2003	Adopts development density and intensity requirements; restricts development density and intensity in WS-IV Watershed protection areas; encourages cluster development and low density development except in areas of adequate infrastructure; requires sedimentation and erosion control plan for lots deeded after September, 1993	High, restricts development to low density / low lot coverage through most of town – particularly in watershed protection area	None
Subdivision Ordinance	Adopted in 1992	Specifies procedures for review and approval of subdivision plats and requires design standards for land development and approval of subdivisions	High, requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas and flood elevations as prerequisite for subdivision	None
Parks / Greenway System	None at this time	Although the Town’s CLUP encourages the development of a park/greenway system, none has been planned or implemented to date	Low, because plans for park/ greenway system have not been implemented to date	Develop and implement plans for park/ greenway system – especially in hazard prone / low lying areas



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Inspections / Permitting	Conducted through Caldwell Co. Central Permitting / Building Insp.	Ensures compliance with State building code	High, centralized and efficient County-wide system for enforcement of State building code	None
Stormwater Management	Previously co-permitted with County; included in Stormwater Management Program with City of Lenoir and other municipalities	City of Lenoir will administer Stormwater Management Program for the Town.	High, City of Lenoir conducts ditch/ drainageway maintenance as necessary	None
Flood Damage Prevention Ordinance	Adopted February 1, 1990	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of Federally backed flood insurance in the Town	High, requires 2 feet of freeboard above Base Flood Elevation (BFE) for all developments in SFHA in Town and ETJ	None
Capital Improvements Plan	Adopted March, 2000; Revised July 16, 2009	Specifies \$13.5 million in planned capital expenditures through 2019 to create a Town wastewater collection system with discharge to the City of Lenoir's wastewater collection system for treatment and to upgrade water system infrastructure	High, allows the Town to have more control over its growth and development by investing in Town-controlled (partially or wholly) infrastructure	None



Table 25. Community Capability Assessment for the Village of Cedar Rock

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Comprehensive Land Use Plan (CLUP)	None at this time	N/A	Low, because policy guidance document does not exist for growth and development	Consider adoption of a CLUP
Zoning Ordinance	Adopted March 28, 2000	Adopts development density and intensity requirements; requires low density development through Village due to strictly residential nature of Village, except for small area adjacent to the Cedar Rock Country Club; established Zoning Board of Adjustment for adjudication of zoning disputes	High, restricts development to low density/low lot coverage through entire Village	None
Subdivision Ordinance	None at this time	N/A	Low, since no Village-wide subdivision standards exist	None, since Village is substantially "built-out"
Watershed Protection Ordinance	None at this time	N/A	Low, since no watershed protection ordinance exists	None, since Village is not in State mandated watershed protection area
Parks/ Greenway System	None at this time	N/A	Low, since no Village owned parks or greenways exist	None, since country club and golf course in Village provide significant recreation and open space for Village residents
Inspections / Permitting	Conducted through Caldwell County Central Permitting/ Building Inspections	Ensures compliance with State building code	High, centralized and efficient county-wide system for enforcement of State building code	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Stormwater Management	NCDOT (for State roads), Village Council conducts ditch/drainage maintenance under contract as necessary	None	Medium, NCDOT and Village do conduct ditch/drainageway maintenance as necessary, but limited resources/powers to control overall stormwater quality and quantity	Continue to investigate County-wide, NPDES/Phase II compliant, stormwater management system with Caldwell County
Flood Damage Prevention Ordinance	Participates under Caldwell County's NFIP program	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of Federally backed flood insurance in the Town	High, requires a foot of freeboard above Base Flood Elevation (BFE) for all developments in SFHA in Town and ETJ	None
Capital Improvements Plan (CIP)	None	N/A	Low, since no CIP exists	None, since Village has no plans for significant capital expenditures in the foreseeable future



Table 26. Community Capability Assessment for the Town of Gamewell

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Land Development Plan	Adopted September, 2006	Contains policies discouraging development of hazard-prone areas and encouraging low density development	High, plan provides policy guidance for growth, zoning, and infrastructure provision	None
Zoning Ordinance / Watershed Protection Ordinance	Adopted on July 16, 1990	Adopts development density and intensity requirements; restricts development density and intensity in WS-IV watershed protection areas; encourages cluster development and low density development except in areas of adequate infrastructure; requires sedimentation and erosion control plan for lots deeded after September, 1993	High, restricts development to low density/low lot coverage through most of town – particularly in watershed protection area	None
Subdivision Ordinance	Adopted prior to 1999	Specifies procedures for review and approval of subdivision plats and requires design standards for land development and approval of subdivisions	High, requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas, and flood elevations as prerequisite for subdivision	None
Parks/ Greenway System	No document reference	The Town maintains the county-owned Gamewell Walking Park behind Gamewell Elementary; will complete new Town-owned park facility in 2010	High, because existing facility meets Town needs	None
Inspections / Permitting	Conducted through Caldwell County Central Permitting / Building Inspections	Ensures compliance with State building code	High, centralized and efficient County-wide system for enforcement of State building code	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Stormwater Management	Previously co-permitted with County; included in Stormwater Management Program with City of Lenoir and other municipalities	City of Lenoir will administer Stormwater Management Program for the Town.	MediumHigh, City of Lenoir conducts ditch/ drainageway maintenance as necessary.	None
Flood Damage Prevention Ordinance	Originally adopted October 11, 1999; revised July 7, 2009	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of federally backed flood insurance in the Town	High, requires elevation above Base Flood Elevation (BFE) for all developments in SFHA in Town and ETJ	None
Capital Improvements Plan	None	N/A	Low, since no CIP exists	Consider adoption of a CIP



Table 27. Community Capability Assessment for the Town of Granite Falls

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Comprehensive Land Use Plan (CLUP)	Adopted February, 1999	"Granite Falls Horizons: Land Development Plan": CLUP guides future development in the Town through policies and strategies in several areas of concern. CLUP encourages infill development, cluster development, and new land use development consistent with infrastructure provision	Medium, sound policies for guiding growth exist, but no explicit policy or strategy statements regarding hazard reduction	Consider incorporation of hazard mitigation principles into future policy statements and strategies when CLUP is revised
Zoning Ordinance	Adopted in 2000; revised in 2007; most recent amendment November, 2009	Adopts development use, design standards, density and intensity requirements within the Town and ETJ and enables a zoning administrator and a zoning board of adjustment to oversee ordinance provisions; encourages "traditional neighborhood development" (TND)/cluster development	High, coordinates zoning districts with land suitability and infrastructure availability and encourages TND/cluster development	None
Subdivision Ordinance	Adopted in 1999	Specifies procedures for review and approval of subdivision plats and requires design standards for land development and approval of subdivisions	High, requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas, and flood elevations as prerequisite for subdivision	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Watershed Protection Ordinance	Adopted October 21, 1996	Restricts development density and intensity in WS-IV watershed protection areas, pursuant to State law; encourages cluster development and low density development except in areas of adequate infrastructure; requires sedimentation and erosion control plan for lots deeded after September, 1993	High, restricts development primarily to low density/low lot coverage in watershed protection area	None
Parks / Greenway System	Full service parks and recreation department with three full-time employees and numerous park facilities	Town plans to acquire additional land for multi-purpose ball fields (5-6 acres).	Medium, as ball field areas can be developed in flood hazard areas more safely and at less cost than most other types of development	Consider giving priority for parks and recreation purchases to safely developed hazard areas
Inspections / Permitting	Conducted through Caldwell County Central Permitting/ Building Inspections	Ensures compliance with State building code	High, centralized and efficient county-wide system for enforcement of State building code	None
Stormwater Management	Drainage ways adjacent to Town-owned/ maintained streets are cleared by Town Public Works Department	No ordinance or document reference at this time	Medium, NCDOT and Town conduct ditch/ drainageway maintenance as necessary, but limited resources/ powers to control overall stormwater quality and quantity	Continue to investigate county-wide, NPDES, Phase II compliant, stormwater management system with Caldwell County



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Flood Damage Prevention Ordinance	Adopted January 18, 1993; updated in 2009	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of federally backed flood insurance in the Town	High, requires a foot of freeboard above Base Flood Elevation (BFE) for all developments in SFHA in Town and ETJ	None
Capital Improvements Plan	Adopted September 17, 2001; revised in March of 2006	Specifies approximately \$7 million in planned capital improvements to Town's water distribution and wastewater collection system through 2021	High, allows the Town to have more control over its growth and development by investing in Town-controlled (partially or wholly) infrastructure	None



Table 28. Community Capability Assessment for the Town of Hudson

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Comprehensive Land Use Plan	Adopted in August, 1995; revised in March, 2008	Hudson Land Development Plan (CLUP) contains policies discouraging development of hazard-prone areas, and encouraging low density development, except in areas with adequate infrastructure	High, CLUP provides policy guidance for growth, zoning and infrastructure provision	None
Zoning Ordinance / Watershed Protection Ordinance	Originally adopted in 1978, significant revision in May, 1989	Adopts development density and intensity requirements; restricts development density and intensity in WS-IV watershed protection areas; encourages cluster development and low density development except in areas of adequate infrastructure; requires sedimentation and erosion control plan for lots deeded after September, 1993	High, restricts development to low density/low lot coverage through most of town – particularly in watershed protection area	None
Subdivision Ordinance	Adopted in 1989	Specifies procedures for review and approval of subdivision plats and requires design standards for land development and approval of subdivisions	High, requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas, and flood elevations as prerequisite for subdivision	None
Parks and Recreation Plan	Adopted in December, 2008; full-service parks and recreation department with two full-time employees and numerous park facilities	Plans to potentially acquire additional park land in flood hazard areas for passive park	High, because of plans to reserve additional park land in flood hazard areas – preventing more intense development	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Inspections / Permitting	Conducted through Caldwell County Central Permitting/ Building Inspections	Ensures compliance with State building code	High, centralized and efficient County-wide system for enforcement of State building code	None
Stormwater Management	Previously co-permitted with County; included in Stormwater Management Program with City of Lenoir and other municipalities	City of Lenoir will administer Stormwater Management Program for the Town.	High, City of Lenoir conducts ditch/ drainageway maintenance as necessary	None
Flood Damage Prevention Ordinance	Adopted in 1990; revised July 7, 2009	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of federally backed flood insurance in the Town	High, requires a foot of freeboard above Base Flood Elevation (BFE) for all developments in SFHA in Town and ETJ	None
Capital Improvements Plan	None	N/A	Low, since no CIP exists	Consider adoption of a CIP



Table 29. Community Capability Assessment for the City of Lenoir

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommend- ations for Future Action
Comprehensive Land Use Plan	Adopted May, 2007	Contains policies discouraging development of hazard-prone areas, and encouraging low density development, except in areas with adequate infrastructure	High, plan provides policy guidance for growth, zoning and infrastructure provision	None
Zoning Ordinance	Zoning originally adopted in 1962, current ordinance originally adopted August 14, 1979, with subsequent amendments and revisions; most recent revision September 22, 2009	Adopts development use, design standards, density and intensity requirements within the City and ETJ and enables the City Planning Department and a zoning Board of Adjustment to oversee ordinance provisions; encourages "planned residential developments" (PRD) /cluster development	High, coordinates zoning districts with land suitability and infrastructure availability and encourages PRD/cluster development	None
Subdivision Ordinance	Originally adopted on September 12, 1977, most recent revision September 22, 2009	Specifies procedures for review and approval of subdivision plats and requires design standards for land development and approval of subdivisions	High, requires adequate ditching / drainage structures and requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas, and flood elevations as prerequisite for subdivision	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Parks / Greenway System	Fifteen full-time staff persons administer eight facilities, including a gymnasium and four parks.	No parks and recreation master plan	Medium, since City is pursuing Clean Water Management Trust Fund monies to acquire properties primarily in flood hazard areas for greenways – but no Master Plan	Consider adoption of a Parks and Recreation Master Plan
Inspections / Permitting	Conducted through Caldwell County Central Permitting/ Building Inspections	Ensures compliance with State building code	High, centralized and efficient county-wide system for enforcement of State building code	None
Stormwater Management	Drainage ways adjacent to City-owned/ maintained streets are cleared by City Public Works Department	No ordinance or document reference at this time	High, NCDOT and City conduct ditch/ drainageway maintenance as necessary	None
Flood Damage Prevention Ordinance	Originally adopted February 27, 1978, revised most recently on September 22, 2009	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of federally backed flood insurance in the Town	High, requires a foot of freeboard above Base Flood Elevation (BFE) for all developments in SFHA in City and ETJ	None
Capital Improvements Plan	The City Finance Office maintains a 5-year master plan	Prioritizes capital expenditures	High	None



Table 30. Community Capability Assessment for the Town of Rhodhiss

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Comprehensive Land Use Plan	None at this time	N/A	Low, because policy guidance document does not exist for growth and development	Consider adoption of a CLUP
Zoning Ordinance	None at this time	N/A	Low, since no zoning regulations exist	Consider adoption of a Zoning Ordinance
Subdivision Ordinance	Adopted June 12, 2000	Specifies procedures for review and approval of subdivision plats, and requires design standards for land development and approval of subdivisions	High, requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas, and flood elevations as prerequisite for subdivision	None
Parks / Greenway System	None at this time	N/A	Low	None
Inspections / Permitting	Conducted through Caldwell Co. Central Permitting/ Building Inspections	Ensures compliance with State building code	High, centralized and efficient county-wide system for enforcement of State building code	None
Stormwater Management	None at this time	N/A	Low, since no stormwater management function exists	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Flood Damage Prevention Ordinance	Adopted August 28, 2007	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of federally backed flood insurance in the Town	High, requires a foot of freeboard above Base Flood Elevation (BFE) for all developments in SFHA in Town	None
Capital Improvements Plan	None	N/A	Low, since no CIP exists	Consider adoption of a CIP



Table 31. Community Capability Assessment for the Town of Sawmills

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Comprehensive Land Use Plan	None at this time	N/A	Low, because policy guidance document does not exist for growth and development	Consider adoption of a CLUP
Zoning Ordinance/ Watershed Protection Ordinance	Adopted as part of a Unified Code of Ordinances (UCO) on January 17, 1995	Adopts development density and intensity requirements; restricts development density and intensity in WS-IV watershed protection areas; encourages cluster development and low density development except in areas of adequate infrastructure; requires sedimentation and erosion control plan for lots deeded after September, 1993	High, restricts development to low density/low lot coverage through most of watershed protection area and/or encourages planned unit / cluster development	None
Subdivision Ordinance	Adopted as part of a Unified Code of Ordinances (UCO) on January 17, 1995	Specifies procedures for review and approval of subdivision plats and requires design standards for land development and approval of subdivisions	High, requires adequate ditching/ drainage structures and requires detailed information on natural features, storm drains, grade of lots and proposed roads, flood hazard areas and flood elevations as prerequisite for subdivision	None
Parks / Greenway System	Parks and Recreation Master Plan adopted in October, 2003	Guides future parks and recreation investments	High	None



Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness/ Rationale for Mitigation	Recommendations for Future Action
Inspections / Permitting	Conducted through Caldwell County Central Permitting/ Building Inspections	Ensures compliance with State building code	High, centralized and efficient county-wide system for enforcement of State building code	None
Stormwater Management	Previously co-permitted with County; included in Stormwater Management Program with City of Lenoir and other municipalities	City of Lenoir will administer Stormwater Management Program for the Town.	High, City of Lenoir conducts ditch/drainageway maintenance as necessary	None
Flood Damage Prevention Ordinance	Adopted in 1990	Ensures that properties developed in Special Flood Hazard Areas (SFHA) meet elevation and design requirements as required by the Federal Emergency Management Agency (FEMA) for provision of federally backed flood insurance in the Town	High, requires a foot of freeboard above Base Flood Elevation (BFE) for all developments in SFHA in Town and ETJ	None
Capital Improvements Plan	Unofficial CIP maintained by Town Administrator's office	Based on consultation with elected officials and ongoing needs assessment, prioritizes capital expenditures for the Town	High	None

C. Legal Capability Review

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



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

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

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

1. Regulations

a. General Police Power

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

b. Building Codes and Building Inspections

Many structural mitigation measures involve constructing and retrofitting homes, businesses, and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through the building code. North



Carolina has a state compulsory building code which applies throughout the state (N.C.G.S. 143-138). However, municipalities and counties may adopt codes for the respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the state code.

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

c. Land Use

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

Zoning: For the purpose of promoting health, safety, morals, or the general welfare, a county or a municipality may adopt zoning and development regulation ordinances. These ordinances may be adopted as part of a unified development ordinance or as a separate ordinance. A zoning ordinance may regulate and restrict the height, number of stories and size of buildings and other structures, the percentage of lots that may be occupied, the size of yards, courts and other open spaces, the density of population, and the location and use of buildings, structures, and land for trade, industry, residence, or other purposes. The ordinance may provide density credits or severable development rights for dedicated rights-of-way pursuant to N.C.G.S. 153A-340 for counties or N.C.G.S. 160A-381 for municipalities.

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



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

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

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

Subdivision Regulation: A county or a municipality may, by ordinance, regulate the subdivision of land within its territorial jurisdiction. In addition to final plat approval, the ordinance may include provisions for review and approval of sketch plans and preliminary plats. The ordinance may provide for different review procedures for differing classes of subdivisions. The ordinance may be adopted as part of a unified development ordinance or as a separate subdivision ordinance. Decisions on approval or denial of preliminary or final plats may be made only on the basis of standards explicitly set forth in the subdivision or unified development ordinance. Whenever the ordinance includes criteria for decisions that require application of judgment, those criteria must provide adequate guiding standards for the entity charged with plat approval. This authority is provided under N.C.G.S. 153-330 for counties and N.C.G.S. 160A-371 for municipalities.



2. Acquisition

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

3. Taxation

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

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

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

4. Spending

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



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

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

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

D. Fiscal Capability Review

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

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

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



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

The following is a list and description of several programs which offer funding for hazard mitigation, redevelopment, and post-disaster recovery:

1. Hazard Mitigation Grant Program (HMGP)

The Federal Disaster Assistance Act (Stafford Act) provides funds authorized by the federal government and made available by FEMA for a cost-share program to states. The HMGP provides 75% of the funds while the states provide 25% of the funds for mitigation measures through the post-disaster planning process. The Division of Emergency Management administers the program in this state. The state share may be met with cash or in-kind services. The program is available only for areas affected by a Presidentially-declared disaster.

2. Disaster Preparedness Improvement Grant (DPIG)

This grant provides federal matching funds for communities to develop hazard mitigation plans, expand existing plans, update disaster preparation plans, and to prepare the administrative plans required to qualify for Hazard Mitigation Grant Program grants. Funds for the DPIG are provided by FEMA and the Division of Emergency Management administers the program in each state.

3. Flood Mitigation Assistance Program (FMAP)/Pre-Disaster Mitigation (PDM)

The FMAP program provides grants for cost-effective measures to reduce or eliminate the long-term risk of flood damage to the built environment and real property. The program's main goal is to reduce repetitive losses to the National Flood Insurance Program. The FMAP is available to eligible communities every year, not just after a Presidentially-declared disaster. Funds for the FMAP are provided by FEMA and the Division of Emergency Management administers the program in each state.

The PDM program is very similar to the FMAP, except that it is funded by a yearly appropriation from FEMA and may address all hazards. Application is made to the State of North Carolina Division of Emergency Management (NCDEM).



4. *Public Assistance Program (PA)*

The Public Assistance provides federal aid to communities to help save lives and property in the immediate aftermath of a disaster and to help rebuild damaged facilities. Grants cover eligible costs associated with the repair, replacement, and restoration of facilities owned by state and local governments and nonprofit organizations. The Public Assistance program is administered by FEMA.

5. *Small Business Administration Disaster Assistance Program*

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

6. *Community Development Block Grant (CDBG)*

The CDBG program provides grants to entitlement communities (metropolitan cities and urban counties) for post-disaster hazard mitigation and recovery following a presidential declaration of a Major Disaster of Emergency. Funds can be used for activities such as acquisition, rehabilitation, or reconstruction of damaged properties and facilities and redevelopment of disaster-affected areas. Funds may also be used for emergency response activities, such as debris clearance and demolition and extraordinary increases in the level of necessary public services. HUD provides funds for the CDBG and the Division of Community Assistance administers the program in each state.

E. Political Acceptability Review

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



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

1. Independent of existing regulations that directly address hazard mitigation (e.g., floodplain management ordinance), hazard mitigation is not a goal that should be addressed *independent of* other goals and objectives of the local government, due to limited local government resources; and
2. Hazard mitigation should be considered and incorporated into policies, procedures and programs which affect land use and development, such as siting of roadways, siting and building of public facilities, zoning and subdivision ordinances, and extension of infrastructure necessary for growth; and
3. Local revenues are insufficient to support hazard mitigation projects for mitigation of existing hazards at the local level, however, Federal and State grant funds for priority hazard mitigation projects should be pursued when available; and
4. One of local government's primary roles in implementing hazard mitigation is educating the public about the risks of natural hazards and how to reduce these risks and/or the costs of these risks.



SECTION 5. VULNERABILITY ANALYSIS

This section of the HMP update identifies specific locations throughout the County that are vulnerable to natural hazards through narrative, data, and maps; establishes "Geographic Planning Areas", which are areas of particular vulnerability to natural hazards; and provides detailed data and analysis of these areas. These tasks are broken into the following subsections:

- A) Developed Areas, Undeveloped Areas and Anticipated Growth Areas
- B) Critical Facilities
- C) Hazardous Locations
 - 1. Individual Hazard Areas
 - 2. All-Hazards Exposure
 - 3. Areas of Natural Hazard Risk Exposure (ANHRE)
- D) Repetitive Loss Structures
- E) Geographic Planning Areas
- F) Special Populations

A. Developed Areas, Undeveloped Areas and Anticipated Growth Areas

1. Developed and Undeveloped Areas

Table 32 provides, in acres, the area of unincorporated Caldwell County and each participating municipality that is developed and undeveloped. This information outlines the conditions present throughout Caldwell County as of September 2009.

Table 32. Acres of Land, Developed and Undeveloped for Caldwell County and Municipalities, 2009

County/Municipality	Developed (Acres)	Undeveloped (Acres)	Percentage of Total Undeveloped
Unincorporated Caldwell County	72,976.85	192,555.59	72.50%
Cajah's Mountain	1,297.92	761.82	36.98%
Cedar Rock	336.15	33.26	9.00%
Gamewell	2,733.36	1,960.90	41.77%
Granite Falls	1,549.55	1,097.69	41.65%
Hudson	1,404.87	646.16	31.50%
Lenoir	7,893.94	3,860.54	32.84%
Rhodhiss	403.43	284.08	41.32%
Sawmills	1,962.22	1,781.98	47.59%

Source: Caldwell County GIS Department and Holland Consulting Planners, Inc.



Maps 2A through 2I (Appendix A) graphically depict the data in Table 32. The information presented in Table 32 was based on actual land use designations as reported by the Caldwell County Tax Office. This information was not available at the time the 2004 plan was developed, and therefore, the information presented in this update deviates from that presented in the existing plan. The MAC, as well as County staff, have determined that utilizing actual land use designations is the most accurate way to conduct the vulnerability analysis.

Table 33 provides a tabular summary of allowable uses in the undeveloped areas of each participating municipality and the unincorporated County.

While Caldwell County does have a comprehensive future land use plan, all of the incorporated municipalities do not (see Section 4 for a community-by-community assessment), and the Caldwell County plan is outdated. The County and its participating municipalities are in the process of discussing a potential joint County-wide Comprehensive Plan; however, this effort is still not underway as of the drafting of this update.

Table 33. Acres of Undeveloped Land by Allowable Future Use

County/Municipality	Residential (Acres)	Commercial (Acres)	Industrial (Acres)	Other (Acres)	Total (Undeveloped Acres)
Unincorporated Caldwell County	140,789.00	161.75	418.55	51,087.97	192,457.27
Cajah's Mountain	605.13	151.80	0.00	4.89	761.82
Cedar Rock	333.26	0.00	0.00	0.00	333.26
Gamewell	1,700.45	29.58	215.30	15.84	1,961.17
Granite Falls	831.03	202.02	0.00	64.64	1,097.69
Hudson	450.82	70.66	114.53	10.15	646.16
Lenoir	2,915.55	390.19	506.69	48.11	3,860.54
Rhodhiss*	N/A	N/A	N/A	N/A	N/A
Sawmills	1,516.21	52.65	0.00	168.12	1,736.98

*The Town of Rhodhiss does not currently have town-wide zoning.

Source: Caldwell County and participating municipality zoning ordinance and Caldwell County GIS Dept.

2. Anticipated Growth Areas

Maps 3A through 3I (Appendix A) depict anticipated growth areas in Caldwell County and in the boundaries (and extraterritorial jurisdictions) of the participating municipalities (the Village of Cedar Rock does not anticipate any new development outside of its existing border or significant development within its existing borders). These areas were identified by each jurisdiction's MAC



member, in consultation with planning, town administration, and public works staff of each community. When available, capital improvement plans, NC Department of Transportation Transportation Improvement Plans, and recent permits were reviewed. The depicted anticipated growth areas are areas where:

- ▶ Water, sewer, roads, and other public services are available or will very shortly (within five years) be available; and/or
- ▶ Permits for development have been filed and/or development permit activity in these areas has been high; and
- ▶ Recent, historical growth trends support future development.

Descriptions of specific anticipated growth areas and the potential impact of natural hazards on these areas follow in Sections 3(C), Areas of Natural Hazard Risk Exposure (ANHRE), of this plan below.

B. Critical Facilities

Of the properties located within Caldwell County, the damage or destruction of publicly-owned facilities poses an immense potential of disrupting the day-to-day lives of the citizens of Caldwell County. Critical facilities are defined for the purpose of this document as those facilities essential to the preservation of life and property during a disaster and or those facilities critical to the continuity of government as well as those necessary to ensure timely recovery.

A map of the critical facilities is provided as Maps 2A through 2I (the Village of Cedar Rock does not have any critical facilities within its borders). Appendix F provides detailed information relating to each identified critical facility throughout Caldwell County. The replacement value listed for each facility has been updated where necessary to reflect the current established tax value for the structure only. All figures relating to the value of each building contents have been eliminated through this update.

It is a common, and unfortunate, reality that critical facilities, as well as roadways and privately constructed buildings often overlap with known hazard areas due to the following factors:

- ▶ Limited resources necessitate the purchase and development of affordable, and thus sometimes hazard prone land; and
- ▶ Hazard prone lands are often the only undeveloped areas proximate to developed areas in need of critical services; and



- ▶ Hazard prone lands are sometimes donated to local governments or inherited by families and thus very attractive for development, due to the lower costs associated with such an option.

In any case, if a critical facility listed in Appendix F is considered to be significantly endangered by or isolated by natural hazards, it will be considered for treatment as an Area of Natural Hazard Risk Exposure (see Section 3(C) below).

C. Hazardous Locations

1. Individual Hazard Areas

Individual hazards to which only specific areas of the County are uniquely exposed are flooding, wildfire, dam failure, and landslide.

Flooding

Various flooding concerns along the John's and Yadkin Rivers and their tributaries such as Wilson and Lower Creeks have long plagued Caldwell County. Lower Creek has the greatest potential of overtopping its banks and effecting large population. Lower Creek flows through the City of Lenoir and southwestward through the Town of Gamewell along Highway 18/64. This area has a large population density and serves as a crucial transportation artery and economic hub for the region.

Maps 2A through 2I (Appendix A) graphically depicts the extent of the high risk flooding areas within the County as defined by the County's Flood Insurance Rate Maps (FIRMs) developed by the Federal Emergency Management Agency (FEMA). FEMA defines areas within "flood zones", based on varying levels of risk of flooding in each area (see below). Properties in zones "A" and "AE" are considered to be high-risk flood zones, as there is a 1% or greater chance of flooding each year. Properties in zone "X-500" have an approximately 0.2% chance of flooding each year.

- ▶ **Zone A:** Special Flood Hazard Areas inundated by the 100-year flood; base flood elevations are not determined.
- ▶ **Zone AE:** Special Flood Hazard Areas inundated by the 100-year flood; base flood elevations are determined.
- ▶ **Zone VE:** Special Flood Hazard Areas inundated by the 100-year flood; coastal floods with velocity hazards (wave action); base flood elevations are determined.



- ▶ **Zone X500:** Areas of 500-year flood.
- ▶ **Zone X:** Areas determined to be outside the 500-year floodplain; minimal flooding.

Table 34 provides information on the number of acres in the FEMA-defined 100-year and 500-year floodplains by jurisdiction.

Table 34. Acres of Developed and Undeveloped Land in Various Flood Zones, Caldwell County and Municipalities, 2009

County/ Municipality	Developed				Undeveloped		
	A/AE	X-500	Not in Flood Zone	Structure Value	A/AE	X-500	Not in Flood Zone
Unincorporated Caldwell County	1,865.0	126.3	70,985.6	\$30,352,900	4,311.6	248.5	187,995.5
Cajah's Mountain	0.0	0.0	1,297.9	\$0	16.3	0.0	745.5
Cedar Rock	26.6	0.0	309.6	\$2,049,800	4.0	0.0	29.3
Gamewell	181.2	65.8	2,486.4	\$3,536,700	460.5	49.4	1,451.0
Granite Falls	8.4	0.0	1,541.2	\$3,218,500	8.4	0.0	1,089.3
Hudson	4.8	0.0	1,400.1	\$22,089,400	2.4	0.0	643.7
Lenoir	585.7	130.5	7,177.7	\$75,896,000	613.6	44.6	3,247.0
Rhodhiss	0.0	0.0	403.4	\$0	0.0	0.0	284.1
Sawmills	23.2	0.0	1,939.1	\$988,500	39.5	0.0	1,742.5

Source: Caldwell County GIS and Holland Consulting Planners, Inc.

Wildfires

Wildfires are items of particular concern in the northern reaches of the County. The northern portion of Caldwell County reaches into the Appalachian Mountains and is the location of the Pisgah National Forest. On an almost annual basis wildfires occur in these areas. This area of the County lacks an adequate arterial transportation network which often leaves populations isolated from public services and other types of needed goods and services. Also of concern for wildfire risk are large tracts of timberlands that abut existing developed areas – also known as the “urban-wildland interface.”

Map 3A (Appendix A) depicts areas particularly susceptible to wildfire risk (only Cedar Rock, Lenoir and the unincorporated County have significant wildfire risk). This map was developed in conjunction with the 2004 plan by the Caldwell County Planning Department based on consultations with the Caldwell County Emergency Management Director and Fire Marshall who had



over 25 years of experience in wildfire evaluation and response in the County. Table 35 provides a tabular breakdown of portions of the county considered to be at elevated wildfire risk as reflected in Map 3A. These areas are based on historical knowledge as outlined above. Technical analysis was not factored into this analysis, primarily due to the fact that there is no history of wildfire.

Table 35. Acres of Developed and Undeveloped Land at Elevated Wildfire Risk, Caldwell County and Municipalities, 2009

County/Municipality	Developed		Undeveloped	
	At Elevated Wildfire Risk	Not at Elevated Wildfire Risk	At Elevated Wildfire Risk	Not at Elevated Wildfire Risk
Unincorporated Caldwell County	43,744.06	28,812.16	154,631.71	37,351.61
Cedar Rock	336.15	0.00	33.26	0.00
Lenoir	1,146.35	6,747.61	87.83	3,772.73

Source: Caldwell County Planning Department.

Landslide

As noted above, the unique topographical features of Caldwell County leave the county vulnerable to the effects of landslides. As development patterns shift and population migrate in to the northern, mountainous regions of the county this threat multiplies. Slopes disturbances, such as clearing and construction, leave the natural equilibrium of the area unbalanced, which has the potential of ending in landslides. As with wildfires, such landslides can further isolate already isolated populations and make it increasingly difficult to provide needed services to these populations.

Slope is an increasing concern in Caldwell County. Map 4 (Appendix A) provides a delineation of the degrees of slope throughout the County. Slope is a major consideration in determining an area’s susceptibility to landslides. Based on state analysis of North Carolina landslides, the likelihood of landslides normally begins at 22° of slope and increases rapidly as the degree of slope increases. However, for construction purposes, 30° slope is ideal for the construction of walk-out basements. Figure 3 provides a comparison of slope measurement in percentages and degrees.

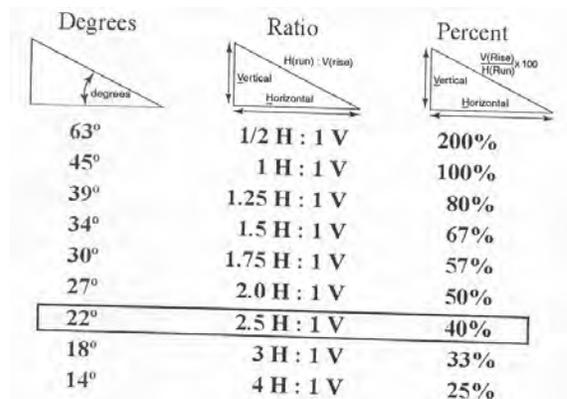


Figure 3. Slope Measurements (Source: Rick Wooten, engineering geologist at the North Carolina Geological Survey)



The following table provides an overview of development conditions throughout the County with varying degrees of slope condition. The information presented in this table provides a snapshot of existing conditions which the County may utilize to determine if additional development regulations are necessary.

Table 36. Degrees of Slope, Caldwell County

	Developed			Undeveloped	
	Parcels	Acres	Building Value	Parcels	Acres
Slope 0° - 20°	14,123	49,126.25	\$1,299,711,400	11,028	77,482.70
Slope 20° - 30°	1,521	15,586.68	\$137,858,900	2,867	65,475.31
Slope 30° - 40°	412	6,806.85	\$39,805,000	1,013	29,785.21
Slope 40° +	60	1,034.32	\$5,536,600	122	18,787.09

Source: Caldwell County GIS and Holland Consulting Planners, Inc.

Dam Failure

As noted above, the entire southern border of Caldwell County was bounded by a chain of lakes created from the Catawba River. This series of dams that impound the Catawba River hold tremendous quantities of water, which is used for drinking and power generation. The impacts upon the County resulting from the failure of any of these impounding structures has the potential to cause catastrophic damage to the southern most areas of the County.

Unfortunately, due to unavailability of data, specific areas of potential flood inundation due to dam failure is not available at this time. It is a goal of the County to obtain this information in the near future (see Section 6 of this plan). The County will work closely with the State Dam Safety Office staff and Duke Power, the owner of the significant dams in southern Caldwell County, to assess the risk posed by this hazard. This effort was not accomplished over the last five years; however, it has been listed as a strategy under this update.

Drought/Extreme Heat

No analysis was performed to address the drought/extreme heat hazard. All properties and citizens are equally vulnerable to this risk within Caldwell County. The County, in conjunction with all participating jurisdictions, will continue to monitor the drought situation in conjunction with the State of North Carolina to ensure that water supply resources are protected and maintained. Through this effort, mandatory water restrictions will be enforced as deemed necessary. This issue is at the forefront of discussions relating to public health and safety within the County.



2. All-Hazards Exposure

The entire County is prone to the effects of severe winter weather, severe thunderstorms/ windstorms, and tornados which are capable of paralyzing the functions of the County and municipal governments. Electrical distribution systems are often interrupted by such storms which gives rise to the need for provisions for shelters where the citizens of the County can receive emergency shelter and other provisions. Mapping of each of these three hazards was not provided. The rationale behind not providing mapping was that the entire geographic area of the County is subject to these events and such mapping would not provide much value. For a detailed breakdown of figures related to the All Hazards Exposure Area, refer to Tables 32 and 33 in this section.

3. Areas of Natural Hazard Risk Exposure (ANHRE)

The process of identifying ANHRE is central to the planning process that produced this document, and serves as the centerpiece of practical hazard mitigation in Caldwell County. The ANHRE are areas within the County that have historically flooded, been subject to landslides or wildfires, or been subject to other hazards or that have a high potential for future exposure to natural hazards that may result in property damage or loss of life. Areas were identified by a team of staff members from each community, including County/town administration, planning and public works, coordinated by the MAC representative from each community. Prioritization criteria are based on the actual or potential frequency and severity of the natural hazard at each location, as described in Table 37.

Table 37. Planning Model for the ANHRE Process

Severity	Frequency		
	High	Medium	Low
High	High Priority	High/Medium Priority	Medium Priority
Medium	High/Medium Priority	Medium Priority	Low/Medium Priority
Low	Medium Priority	Low/Medium Priority	Low Priority

The County believes that this process is politically supportable, as it focuses on hazards that have historically occurred rather than those that are solely speculative. Real people have suffered damages at the identified ANHRE sites or very likely may in the future. The process, therefore, makes the goals of mitigation concrete rather than abstract to political leaders and citizenry. ANHRE for each participating community are provided in Appendix G.

Maps 3A through 3I (Appendix A) depict the ANHRE for each participating jurisdiction.



D. Repetitive Loss Structures

As noted in "Keeping Natural Hazards From Becoming Disasters: A Mitigation Planning Guidebook for Local Governments" (NCDEM and UNC-CH, 2003), "repetitive loss structures" are those that have suffered damage from repeated hazard events. The only reliable source of information on repetitive loss structures are flood insurance claims data available through the National Flood Insurance Program (NFIP), administered by the NCDEM Mitigation Division.

The County obtained this data from NCDEM in November 2009. According to this information, there are currently no repetitive loss properties located within unincorporated Caldwell County. The only participating jurisdiction with repetitive loss properties is the City of Lenoir. There are three non-residential repetitive loss properties in Lenoir; however, there are no plans to treat these properties. The County will monitor these properties following flooding events.

E. Geographic Planning Areas

Each participating municipality and unincorporated Caldwell County will constitute its own Geographic Planning Area (GPA). Henceforth in this document, each GPA will be identified by the community name (e.g., Town of Gamewell). The reason for this decision is that different governing bodies are responsible for growth and development decisions in each GPA and that multiple GPAs within one jurisdiction would unduly focus on one hazard or one area over others when all hazards will be addressed in a prioritized fashion as described in Section VII of this HMP.

F. Special Populations

A detailed review of US Census data, local comprehensive plans and zoning ordinances, and disaster damage data does not indicate that any particular demographic group is disproportionately affected by natural hazards in Caldwell County or its constituent jurisdictions by natural hazards. One reason that this is the case is that only approximately 6% of Caldwell County residents are racial minorities. Please refer to the County and municipal comprehensive land use plans cited in Section 4 of this plan for further review of this issue.



SECTION 6. MITIGATION GOALS, OBJECTIVES, AND STRATEGIES

A. Introduction

This section of the Hazard Mitigation Plan Update outlines all of the goals, objectives, and strategies that will be implemented at the County level. The goals and objectives discussed within this section have not been modified from the 2004 plan. All mitigation strategies have been updated and are intended to reflect the current needs and desires of the Mitigation Advisory Committee and their respective jurisdictions. The mitigation strategies developed through the planning process will be implemented at the County level. The primary focus over the next five years will be to make the Community Rating System program available for all jurisdictions within the County that participate in the NFIP. Caldwell County will take the lead in undertaking this effort, with support and assistance from MAC members. If a strategy only applies to a single jurisdiction, it is clearly noted under "Applicable Jurisdiction."

B. 2004 Mitigation Progress Report

1. Public Participation

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

2. Monitoring and Evaluation

Caldwell County has utilized the information within this document for day-to-day planning efforts. Through monitoring the status of this plan, the County has not only improved upon the data resources utilized in the vulnerability analysis, but will work with participating jurisdictions to secure membership in the Community Rating System. The County's administration maintains a dialogue with the County Board of Commissioners regarding mitigation/emergency management issues, and provides the public with information when deemed necessary.



3. *Mitigation Strategy Progress*

The following section provides a status update regarding the mitigation strategies outlined in the 2004 Caldwell County Hazard Mitigation Plan. Some of these strategies have been completed and will not be reflected within the plan update. If a strategy was deemed to be ongoing, or was not completed, then it will remain within the update and will be considered for implementation within the next five years.

Strategy #1: Review adequacy of existing ordinances for control of landslide hazard that may result from inadequately stabilized, high-slope development.

Caldwell County and the MAC recognize that the issue of landslides and the potential damage that they may cause is an issue that needs to be addressed. Within this update, a vulnerability analysis was conducted to specifically address development patterns within portions of the County where steep slopes exist. No action was taken by the Caldwell County Board of Commissioners regarding this issue over the last five years; however, this strategy has been revised and included within this update. The updated information provided in this update will provide the County with the facts they will need to make an informed decision about how this issue should be addressed.

Status: Revised

Strategy #2: Consider development of a Special Needs Registry.

In late 2008/2009, Caldwell County Emergency Services established a county-wide special needs registry. This effort is still in its early stages, and will be a focus of the County's mitigation strategy over the next five years. The County will rely on the assistance of all participating jurisdictions to advertise the availability of this service.

Status: Completed

Strategy #3: Development (or update) of a Parks and Recreation Master Plan, incorporating purchase and development of flood-prone or wildfire prone lands for recreational activities as a priority.

This strategy will be maintained through this update, and the Town of Granite Falls will consider moving forward with this effort over the next five years. It should be noted that the City of Lenoir and the Town of Hudson both developed parks and recreation plans over the last five years with the assistance of the Western Piedmont Council of Governments.

Status: Incomplete



Strategy #4: Consideration of adoption of a Comprehensive Stormwater Management Program (SMP).

In 2007, Caldwell County in conjunction with several of the participating jurisdictions, established a stormwater management program. The program was established in response to requirements outlined under the National Pollutant Discharge Elimination System (NPDES) Phase II. The program is enforced County-wide with the exception of Rhodhiss and Cedar Rock. Currently, the City of Lenoir is charged with administering this program on behalf of the County.

Status: Completed

Strategy #5: Consideration of adoption or refinement of a Capital Improvements Program (CIP).

This strategy was established in the 2004 plan for the Towns of Hudson and Gamewell. Neither jurisdiction has taken steps over the last five years to implement this strategy. This strategy will be maintained through this update, and these two jurisdictions will consider the development of a CIP over the next five years.

Status: Incomplete

Strategy #6: Work with the State Office of Dam Safety (ODS) to: a) Ensure that all dams in Caldwell County for which the ODS has jurisdiction are inspected on a regular basis; and b) Ensure that ODS notifies the Caldwell County Emergency Management (EM) office of all ODS jurisdictional dams classified as "high hazard" or "distressed" dams; and c) Attempt to ensure that all high hazard or distressed dams in the County have an updated and implemented operations and maintenance plan and emergency action plans; and d) Provide the County EM office with an inventory of all ODS jurisdictional dams in the County; and e) With the assistance of ODS and/or dam owners, determine the extent of flood inundation if dam failure were to occur for each major dam in the County.

Caldwell County in conjunction with all participating jurisdictions support the efforts of the NC Office of Dam Safety (NCODS) to carry out the strategies outlined within the 2004 plan. Caldwell County does not have the jurisdictional authority to implement several of these statements and therefore, the County will continue to rely on the NCODS to ensure that all dam facilities located within the County are maintained. This modification will be reflected within this updated.

Status: Ongoing/Revised



Strategy #7: Work with the North Carolina Department of Transportation (NCDOT) Division Eleven Highway Operations unit and convene a working group (County-wide or local) to develop solutions to localized drainage issues caused (in part or in whole) by NCDOT maintained drainage facilities.

Caldwell County has not taken steps to convene a working group with NCDOT to discuss the issue of localized draining and flooding issues. Through this update, this strategy will be revised to more generally address localized flooding issues. This effort will be headed up by the Caldwell County Planning Board with direction from the MAC. NCDOT may be involved if it is deemed necessary.

Status: Revised

Strategy #8: Review "Firewise" zoning and subdivision standards and report on their appropriateness for incorporation into existing (or new) zoning and subdivision ordinances.

Neither Caldwell County nor any of the participating jurisdictions have taken steps to incorporate "firewise" standards into their respective development regulations. Through discussions with the MAC, it was determined that this strategy will not be carried out and therefore, should not remain in the plan.

Status: Removed

Strategy #9: Implement public education efforts designed to help inform the public of their exposure to natural hazards and to inform them of actions they can take to mitigate the damages to their health and property from natural hazards, including but not limited to the following:

- 1. Ensure that the local library maintains documents about flood insurance, flood protection, floodplain management, and natural and beneficial functions of floodplains. Many documents are available free of charge from the Federal Emergency Management Agency (FEMA).*
- 2. Encourage builders, developers, and architects to become familiar with the NFIP land use and building standards by attending annual workshops presented by the NC Division of Emergency Management (DEM). This can be accomplished by creating a mailing list and providing it to DEM to use for its announcements. This task can be further supported by distributing copies of DEM's announcement from the County's inspections department when builders and developers apply for permits.*



3. *Send a flood protection flyer to all properties in the County through a community newsletter, utility bill, telephone book, or other document that is distributed to all residences. The flyer should include the following information: the name and location of the closest, County-approved shelter, a general identification of the local flood hazard, flood safety, flood insurance, property protection, floodplain development permit requirements, and drainage system maintenance.*
4. *Provide local real estate agents with handouts that will advise potential buyers to investigate the flood hazard for the property they are considering purchasing.*

Caldwell County has not been proactive in carrying out the public information efforts outlined in this strategy. The County intends to establish a coordinated effort aimed at implementing this strategy through this update. All activities outlined within this strategy are tied to the Community Rating System, which will be focus of this update. All of the activities listed above are included in the update; however, they have been broken out into independent strategies.

Status: Ongoing/Revised

Strategy #10: Convene a working group with electric service providers in the County and produce a report, with specific recommendations and detailed implementation timelines, that addresses the issues of 1) disaster preparedness techniques (e.g.: tree trimming, pole replacement) and 2) communication with County officials during and immediately after a natural hazard event that results in loss of electrical power.

Caldwell County has not taken steps to establish a working group to specifically address the issue of continuity of service in the face of a natural disaster. Through the 2010 update, the County will draft a strategy stating that a staff member for each electric service provider operating within the County will be invited to attend all future Local Emergency Planning Committee meetings (LEPC).

Status: Incomplete/Revised

Strategy #11: Apply for funding from the Hazard Mitigation Grant Program (HMGP) or other Federal/State funding for at least two (2) of the top priority ANHRE identified in Section III of this plan IF they are eligible and in a project category identified by the State of North Carolina as being of high priority.

Neither Caldwell County nor any of the participating jurisdictions have applied for HMGP funding over the last five years for any structural projects. The County will maintain this



strategy, and as potential projects arise the County will perform the due diligence required to secure funding.

Status: Ongoing

Strategy #12: Encourage surveyors, local government officials, engineers, and land planners to become familiar with the NFIP land use and building standards by attending annual workshops presented by the NC Division of Emergency Management (DEM).

This strategy will be maintained through the plan update; however, it has been slightly revised to better reflect the requirements and intent of the Community Rating System.

Status: Revised

Strategy #13: Consider becoming (City of Lenoir, Towns of Granite Falls and Town of Sawmills) or remain (Caldwell County) a participant in the Community Rating System (CRS) program of the National Flood Insurance Program (NFIP).

Caldwell County, as well as several of the participating municipalities, have made participation in the CRS program an integral part of all strategies outlined in this update. A majority of the revised strategies are geared towards compliance and participation in the CRS program.

Status: Revised

Strategy #14: Coordinate with Duke Power to determine the flood inundation zone that would result from a failure (partial or total) of Duke-owned dams in (and upstream of) southern Caldwell County and educate the public about the likelihood of such an event and evacuation/safety procedures. Incorporate this information into HMP update.

As stated earlier in this progress report, Caldwell County and all participating jurisdictions will continue to rely on the NC Office of Dam Safety to enforce all regulations relating to the enforcement of dam maintenance requirements. At this time, data relating to a breach of dam facilities owned and operated by Duke Power is not readily available. The County will continue to monitor the availability of this information, and if it becomes available over the next five years, the MAC will take steps to incorporate that information into the 2015 Caldwell County Hazard Mitigation Plan Update. The County will utilize this information if it becomes available; however, this strategy will be eliminated through this update.

Status: Removed



Strategy #15: The responsible party will coordinate with each department head in the local government and produce a report on ways in which hazard mitigation goals, objectives and strategies can be incorporated into existing policies and implemented through existing programs and personnel.

As a general practice, the hazard mitigation plan will be referenced and considered during the update and/or amendment of all land development ordinance and policies for Caldwell County, as well as all participating jurisdictions. Due to this practice (outlined in section 7 of this plan update), this strategy will not be incorporated into the 2010 update.

Status: Removed

Strategy #16: Ensure that all potential hazard mitigation partners and stakeholders are involved in the hazard mitigation planning process – both through input/comment and assignment of duties and responsibilities to help implement hazard mitigation. These efforts will include, but are not limited to the following:

- ▶ *Posting of this plan along with solicitations for comments/questions on the Caldwell County and municipal websites (where present).*
- ▶ *Identification of and solicitation of comments from all potential institutional partners, including, but not limited to: academia, business sector, non-profit sector, and adjacent local governments.*
- ▶ *Ensure that at least two (2) articles are published in the Hickory and Lenoir newspapers regarding hazard mitigation and advertising the forums discussed below.*
- ▶ *Produce a brief, but informative, short item for cable access that will also advertise the forums discussed below.*
- ▶ *Hold at least two (2) forums on hazard mitigation that will be heavily advertised on local cable access and in the local Lenoir and Hickory newspapers – both the general public and the above-referenced institutional partners will be invited to these forums. These forums shall include discussions of hazard mitigation in general and shall include the evaluation items included in Section 7 of this plan.*

Caldwell County has not been proactive in carrying out this strategy over the last five years. The County will maintain this strategy in an effort to maintain its membership in the Community Rating System. Additionally, the County will take steps to make this program available to all participating jurisdictions through a coordinated effort to conduct all required activities. In an effort to better define measures to establish compliance with the CRS program, this strategy has been modified and broken into a series of individual efforts.



Through this modification several of the activities listed above have been eliminated, but the County still aims to maintain a proactive public outreach campaign.

Status: Incomplete/Revised

Strategy #17: The responsible party will develop a report by June 1, 2005, and for each subsequent HMP update that addresses the following issues within each participating jurisdiction: a) Potential future vulnerability - in 2004 dollars - of development of privately owned land, critical facilities, roadways and other infrastructure in known high hazard areas if built-out pursuant to existing zoning code; and b) Review of policies regarding development of critical facilities or other publicly owned buildings and/or infrastructure in known high hazard areas, including any recommendations regarding this topic.

This effort is being carried out through the process employed to develop this Hazard Mitigation Plan Update. All information presented in this plan update reflects conditions present as of 2010, and will serve as the basis for all decisions related to mitigation moving forward for Caldwell County, as well as all participating jurisdictions.

Status: Complete

C. Development of Goal Categories

A "goal" is defined as the state of affairs that a plan is intended to achieve. As such, it is general, aspirational, "almost philosophical in nature" and is unique to each participating jurisdiction. Nevertheless, all communities face basic issues in regards to hazard mitigation, and therefore, common goal categories have been developed for each community, as follows:

- ▶ General: Goals that address the community's level of vulnerability and hazard threat in general.
- ▶ Future Development: Goals that consider future development in areas exposed to an elevated risk of natural hazard damage.
- ▶ Existing Development: Goals that address existing infrastructure and buildings in areas exposed to an elevated risk of natural hazard damage.
- ▶ Redevelopment: Goals that address redevelopment in case of a natural disaster.



- ▶ Public Education and Outreach: Goals that are focused on educating the public on natural hazard risks.
- ▶ Natural Resource Protection: Goals that are focused on natural resource protection and a means of hazard mitigation.

D. Community Goals

It is critically important that hazard mitigation goals do not exist in isolation from overall community goals. As such, all documents, such as comprehensive land use plans, zoning ordinances, emergency management plans, etc., as referenced in Section 4 of this plan were consulted and reviewed in developing the following community goals. These goals have been reviewed by the MAC in conjunction with this update, and determined that all goal statements are still relevant and applicable to the County, as well as all participating jurisdictions.

Table 38 below provides the community goals for Caldwell County. As stated above, hazard mitigation goals are unique to each community. However, the participating communities in this plan that comprise Caldwell County recognize their interconnectedness and the need to achieve coordinated goals. If this is not done, communities will essentially be “competing” against each other in their concern for mitigation, creating a situation where some citizens of the County are safer than others. The goals stated below were developed by and approved by the MAC.

Table 38. Hazard Mitigation Goal Statement for Participating Communities in Caldwell County

Goal Category	Goal Number	Goal Statement and Source Reference	New or Existing Goal?	Hazard Threat Addressed
General	1	Reduce the risk of loss of life and personal injury from natural hazards (see Caldwell County Emergency Operations Plan)	Existing	All
Future Development	2	Reduce the risk and impact of future natural disasters by regulating development in known high hazard areas (see Caldwell County and municipal land use plans, flood damage prevention ordinances and zoning/ subdivision ordinances)	Existing	All (primarily flooding)



Goal Category	Goal Number	Goal Statement and Source Reference	New or Existing Goal?	Hazard Threat Addressed
Existing Development	3	Pursue funds to reduce the risk of natural hazards to existing developments where such hazards are clearly identified and the mitigation efforts are cost effective	Existing	All (primarily flooding)
Redevelopment	4	Ensure that hazard mitigation is considered when redevelopment occurs after a natural disaster	Existing	All
Public Education and Outreach	5	Provide education to citizens that empowers them to protect themselves and their families from natural hazards (see Caldwell County CRS Plan)	Existing	All
Natural Resource Protection	6	Protect the fragile natural and scenic areas of the County, particularly those areas that protect drinking water supplies (see County and municipal water supply watershed protection ordinances)	Existing	Flooding, primarily
General	7	Use existing policies, programs, and personnel to promote hazard mitigation in the County and its constituent jurisdictions	Existing	All

E. Mitigation Objectives and Strategies

This section of the HMP identifies specific objectives and strategies that will “put into action” the mitigation goals established in the preceding discussion. These objectives and strategies were developed by completing the following steps:

- ▶ Prioritizing each community’s Geographic Planning Areas (GPA).
- ▶ Prioritizing all mitigation strategies based on furthering the County’s participation in the National Flood Insurance Program.
- ▶ Determining which types of mitigation strategies are appropriate for each GPA.
- ▶ Formulating selection criteria.
- ▶ Identifying policies to carry out the mitigation strategies.
- ▶ Creating an action plan for the mitigation strategies.
- ▶ Prioritizing the policies.
- ▶ Identifying funding sources.
- ▶ Assigning implementation responsibilities.



1. *Discussion of Mitigation Strategies and Section Format*

In the following subsections (subsection 3, below), the County and its participating jurisdictions have identified hazard mitigation **objectives**, which can be defined as measurable, concrete steps towards achieving the goals presented in the preceding section. When all objectives are completed, the goals stated in the preceding section will be considered to have been met. In subsection 4, below, the County and its participating jurisdictions have identified hazard mitigation **strategies**, which are specific tasks and actions that achieve the above stated objectives. When all **strategies** have been implemented, the objectives presented in subsection 3 below will be considered to have been met.

When formulating objectives and **strategies**, the County and its participating jurisdictions were very mindful of the available types of activities, or **strategies** that will result in natural hazard mitigation, as presented in "*Keeping Natural Hazards from Becoming Disasters: A Mitigation Planning Guidebook for Local Governments*" published in May of 2003 by the NCDM Hazard Mitigation Section and the Hazard Mitigation Planning Clinic at the Department of City and Regional Planning at the University of North Carolina at Chapel Hill. These are summarized below:

- ▶ Prevention: Actions designed to reduce the community's future vulnerability, such as zoning or stormwater management regulations.
- ▶ Property Protection: Retrofitting or removal of existing structures subject to a elevated risk of natural hazard damage.
- ▶ Natural Resource Protection: Preserving or restoring natural features to ensure or enhance their mitigative functions.
- ▶ Structural Projects: Modification of the natural environment through built structures to protect property and life.
- ▶ Public Information: Educational and informational activities.

In devising the strategies outlined in this section, the MAC took the following factors into consideration:

- ▶ The strategy will solve the problem it is intended to solve, or begin to develop a solution; and
- ▶ The strategy meets at least one community mitigation goal; and



- ▶ The strategy complies with all laws and regulations; and
- ▶ The strategy is cost-beneficial; and
- ▶ The community implementing the strategy has (or will have) the capability to do so; and
- ▶ The strategy is environmentally sound; and
- ▶ The strategy is technically feasible; and
- ▶ The strategy will further the County's standing in the NFIP.

A key focus in formulating the updated strategies was the cost benefit of each project and/or program. The MAC reviewed each proposed strategy with respect to the overall short and long term cost in relation to the benefits that will be ultimately afforded to the citizens of Caldwell County. The strategies outlined in Table 39 were deemed to be achievable, and ultimately will result in a more comprehensive mitigation program throughout Caldwell County.

The basis for prioritization of mitigation **strategies** was determined by the MAC members from each local government for which the policy is applicable based on their review and consideration of the data collected as part of the HMP plan development and their (i.e., MAC members) collective knowledge of hazards in their community.

2. Mitigation Objectives

As stated in subsection 2 above, **objectives**, are defined as measurable, concrete steps towards achieving stated goals. When all objectives are completed, the goals stated in the preceding section will be considered to have been met.

Objectives were generated by and approved by the MAC. Each individual MAC member indicated the applicability of each objective to their local government. This is also true of the hazard mitigation strategies discussed below, although the applicability of each individual policy to each individual local government is primarily a function of the vulnerability and community capability analyses produced in Sections 4 and 5 of this plan.



Table 39. Hazard Mitigation Objectives for Participating Communities in Caldwell County

Goal Number	Objective Number	Objective	Participating Jurisdiction to Which Objective is Applicable
1	1	Ensure that all sheltering facilities are well publicized, accessible, and meet National standards for safety and supply	All (Caldwell County is lead)
1	2	Ensure that on-site sheltering is a safe option (or as safe as possible) for families that cannot or will not leave their homes	All (Caldwell County is lead)
1	3	Reduce the frequency of electrical outages and length of time such outages last	All (Caldwell County is lead)
2	1	Preserve open space in floodplain areas	All
2	2	Reduce the risk of damage from wildfires to future development	Caldwell County
3	1	Reduce the risk of flooding to existing and future development and existing and future citizens	Caldwell County
3	2	Maximize the use of available hazard mitigation grant programs to protect the most vulnerable structures and populations from existing and known hazards	All
3	3	Reduce the risk of dam failure to existing and future development	All (Caldwell County is lead)
3	4	Reduce the risk of damage from landslides to existing and future development	Caldwell County, Village of Cedar Rock, City of Lenoir
4	1	Develop specific, timely recommendations for hazard mitigation measures following a State or Federally declared natural disaster	All (Caldwell County is lead)
5	1	Ensure that the public is aware of the risks of different types of natural hazards, and reduces their personal exposure to natural hazards	All (Caldwell County is lead)
5	2	Ensure that local governments in the County obtain input regarding hazard mitigation needs and capacities and that local governments are receiving assistance from all possible sources, including academia, the business community, the non-profit community, neighboring local governments, and the general public	All (Caldwell County is lead)
6	1	Effectively manage stormwater discharging into water bodies.	All
7	1	Ensure that hazard mitigation is implemented through existing policies, programs and personnel, to the maximum extent practicable and economically justified	All



3. *Mitigation Strategies*

Specific actions, or **strategies**, are needed to realize each objective provided above. For each strategy, the following information will be provided in this subsection:

- ▶ A statement of the strategy.
- ▶ A statement of whether it is a new or revised action.
- ▶ A listing of the jurisdictions to which it is applicable.
- ▶ A listing of the applicable CRS activity.
- ▶ The estimated CRS points.
- ▶ The goal(s)/objective(s) it will achieve.
- ▶ The priority the action has (high, medium or low). Priority of mitigation policies was determined by the MAC members from the local governments for which each policy is applicable.
- ▶ The hazard(s) it is developed to address.
- ▶ Possible funding sources, if any.
- ▶ The agency or staff member assigned with responsibility for the strategy.
- ▶ CRS documentation.
- ▶ Implementation schedule.

Each implementing action has been provided a priority of low, medium, or high according to the institutional capability, financial feasibility of implementation, and need for action to support effective mitigation planning. Those rankings are defined as follows:

- ▶ High Priority: Highly cost-effective, administratively feasible and politically feasible policies that should be implemented in fiscal years 2010/2011 and 2011/2012 and be continued.
- ▶ Medium Priority: Policies that have at least two of the following characteristics (but not all three) and that should be implemented in fiscal years 2012/2013 to 2014/2015:
 - Highly cost-effective; or
 - Administratively feasible, given current levels of staffing and resources; or
 - Politically popular and supportable given the current environment.
- ▶ Low Priority: Policies that have at least one of the following characteristics (but not two or three) and that should be implemented in the next five (5) years (by the end of 2014/2015):



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

Policies will be implemented earlier if resources are available.

The defined mitigation strategies follow below:

Strategy #1	Require a finished floor elevation certificate for all development within the special flood hazard area (SFHA) within both incorporated and unincorporated portions of the County. All elevation certificates should be submitted on an official FEMA elevation certificate. No certificate of occupancy shall be issued for any development within a defined special flood hazard area without the submittal of the required elevation certificate.			
Action New/Revised	Revised			
Applicable Jurisdictions	Caldwell County, Town of Cahah’s Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	310: Elevation Certificates			
Estimated CRS Points	70			
Objective Addressed	3.1			
Priority	High			
Hazards Addressed	Flooding, dam/levee failure			
Possible Funding Sources	Existing staff and administrative resources			
Responsibility	Primary Responsible Party: Caldwell County Building Inspections 828/426-8585 Secondary Responsible Party: Caldwell County Planning Department 828/757-6855			
CRS Documentation	All required elevation certificates shall be kept on file.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #2	Maintain a map information service involving the following: <ul style="list-style-type: none"> ▶ Provide information relating to Flood Insurance Rate Maps (FIRM) to all inquirers, including provision of information on whether a given property is located within a flood hazard area. ▶ Provide information regarding the flood insurance purchase requirement. ▶ Maintain historical and current FIRMs. ▶ Advertise once annually in the local newspaper. ▶ Provide information to inquirers about local floodplain management requirements.
Action New/Revised	Revised
Applicable Jurisdictions	Caldwell County, Town of Cahah’s Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss
CRS Activity	320: Map Information Service
Estimated CRS Points	140
Objective Addressed	3.1, 3.3, 5.1
Priority	High
Hazards Addressed	Flooding, dam/levee failure
Possible Funding Sources	Existing department and staff resources
Responsibility	<p>Primary Responsible Party: Caldwell County Planning Department 828/757-6855</p> <p>Secondary Responsible Party: Administrative staff of all participating jurisdictions Town of Cahah’s Mountain 828/728-5053 Town of Gamewell 828/754-1991 Village of Cedar Rock 828/757-4545 Town of Granite Falls 828/396-3131 Town of Sawmills 828/396-3131 City of Lenoir 828/396-7903 Town of Hudson 828-728-8272 Town of Rhodhiss 828/396-8400</p>



<p>CRS Documentation</p>	<p>The Caldwell County Planning Department shall maintain the following information:</p> <ul style="list-style-type: none"> ▶ A log of inquiries including: date, FIRM zone of subject property, address/ location of subject property, indication that inquirer was informed of insurance purchase requirement. ▶ Records of all agencies who have inquired, or were provided information. ▶ Copies of historical and current FIRMs. ▶ An affidavit documenting that this service was publicized in the local newspaper once annually. <p>Municipal jurisdictions seeking CRS credit must maintain a statement that Caldwell County has agreed to provide this service on their behalf.</p>			
<p>Implementation Schedule</p>				
<p>Year 1</p>	<p>Year 2</p>	<p>Year 3</p>	<p>Year 4</p>	<p>Year 5</p>
<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>



Strategy #3	Caldwell County will annually mail a notice to all property owners whose land is located within a special flood hazard area. The notice should clearly state that the recipient's property is susceptible to flooding and provide information pertinent to emergency evacuation and post-disaster recovery.			
Action New/Revised	Revised			
Applicable Jurisdictions	Unincorporated Caldwell County (this may be expanded if any of the participating jurisdictions join the CRS program)			
CRS Activity	330: Outreach Activities			
Estimated CRS Points	130			
Objective Addressed	3.1, 5.1			
Priority	High			
Hazards Addressed	Severe thunderstorms and windstorms			
Possible Funding Sources	All communities participating in the Community Rating System shall share the cost of mailing floodplain notices to all property owners within an SFHA.			
Responsibility	Primary Responsible Party: Caldwell County Planning Department 828/426-8585 Secondary Responsible Party: Caldwell County Emergency Services 828/757-1424			
CRS Documentation	The Caldwell County Planning Department shall maintain the following information: <ul style="list-style-type: none"> ▶ A copy of the notice mailed to all property owners located within an SFHA. ▶ A listing of all property owners to whom the notice was mailed. ▶ A notice certifying the date the notices were mailed. 			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #4	The Caldwell County Planning Department will work with local real estate agencies to ensure that agents are informing clients when property for sale is located within an SFHA. Caldwell County will provide these agencies with brochures documenting the concerns relating to development located within floodprone areas and ways that homeowners may make their homes more disaster resistant to strong winds, lightning, and heavy rains.			
Action New/Revised	Revised			
Applicable Jurisdictions	Unincorporated Caldwell County (this may be expanded if any of the participating jurisdictions join the CRS program)			
CRS Activity	340: Hazard Disclosure			
Estimated CRS Points	56			
Objectives Addressed	3.1, 5.1			
Priority	High			
Hazards Addressed	Flooding, severe winter weather, wildfire, severe thunderstorms/windstorms			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Planning Department 828/426-8585 Secondary Responsible Parties: Caldwell County Emergency Services 828/757-1424			
CRS Documentation	The Caldwell County Planning Department shall maintain the following information: <ul style="list-style-type: none"> ▶ Disclosure statements from five local real estate agencies stating that it is their agencies' policy to inform clients if a property is located within an SFHA. ▶ A copy of the brochure that the county has disseminated to real estate agents. 			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



<p>Strategy #5</p>	<p>The Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within floodplains available through the following:</p> <ul style="list-style-type: none"> ▶ Ensuring that the local library maintains information relating to flooding and flood protection. ▶ Providing a link on their website to FEMA resources addressing flooding and flood protection. ▶ All participating jurisdictions, if a web site is in place, will provide a link on their website to FEMA resources addressing flooding and flood protection, sheltering, evacuation procedures, disaster preparedness, and post disaster recovery.
<p>Action New/Revised</p>	<p>Revised</p>
<p>Applicable Jurisdictions</p>	<p>Caldwell County, Town of Cahaj’s Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss</p>
<p>CRS Activity</p>	<p>350: Flood Protection Information</p>
<p>Estimated CRS Points</p>	<p>97</p>
<p>Objectives Addressed</p>	<p>1.1, 3.1, 3.3, 5.1, 7.1</p>
<p>Priority</p>	<p>High</p>
<p>Hazards Addressed</p>	<p>Flood, severe winter weather, wildfire, severe thunderstorms/windstorms, dam/levee failure, tornados</p>
<p>Possible Funding Sources</p>	<p>Existing department and staff resources</p>
<p>Responsibility</p>	<p>Primary Responsible Party: Caldwell County Building Inspections 828/426-8585</p> <p>Secondary Responsible Party: Administrative staff of all participating jurisdictions Town of Cahaj’s Mountain 828/728-5053 Town of Gamewell 828/754-1991 Village of Cedar Rock 828/757-4545 Town of Granite Falls 828/396-3131 Town of Sawmills 828/396-3131 City of Lenoir 828/396-7903 Town of Hudson 828-728-8272 Town of Rhodhiss 828/396-8400</p>



CRS Documentation	The Caldwell County Planning Department shall maintain the following information: <ul style="list-style-type: none">• A listing of publication dates for all materials on file at the local library.• A statement from the Librarian that the flood-related materials are listed within the library's resource management system.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



<p>Strategy #6</p>	<p>The Caldwell County Building Inspections Department will provide comprehensive services regarding planning and development activities within the defined SFHA and issues relating to the construction of disaster resistant structures. These services will include:</p> <ul style="list-style-type: none"> ▶ Providing site specific flood and flood-related information on an as needed basis. ▶ Maintaining a list of contractors with experience in floodproofing and retrofit techniques. ▶ Providing information on wind proofing construction methods for new and renovated structures. ▶ Maintaining materials providing an overview of how to select a qualified contractor. ▶ Making site visits upon request to review occurrences of flooding, drainage problems, and sewer problems. If applicable, the inspector should provide one-on-one advice to the property owner. ▶ Providing advice and assistance regarding CRS activity 530. ▶ Advertising the availability of this service once annually within the local newspaper. ▶ Maintaining a log of all individuals assisted through this County service including all site visits.
<p>Action New/Revised</p>	<p>Revised</p>
<p>Applicable Jurisdictions</p>	<p>Caldwell County, Town of Cahaj’s Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss</p>
<p>CRS Activity</p>	<p>360: Flood Protection Assistance</p>
<p>Estimated CRS Points</p>	<p>66</p>
<p>Objectives Addressed</p>	<p>3.1, 3.3, 5.1</p>
<p>Priority</p>	<p>High</p>
<p>Hazards Addressed</p>	<p>Flood, severe winter weather, wildfire, severe thunderstorms/windstorms</p>
<p>Possible Funding Sources</p>	<p>Existing department and staff resources</p>
<p>Responsibility</p>	<p>Primary Responsible Party: Caldwell County Building Inspections 828/426-8585</p> <p>Secondary Responsible Party: Caldwell County Planning Department 828/757-6855</p>



<p>CRS Documentation</p>	<p>The Caldwell County Planning Department shall maintain the following information:</p> <ul style="list-style-type: none"> ▶ Affidavit of publication for the advertisement regarding the provision of flood protection assistance. ▶ A copy of the contractor’s list on file in the Building Inspections Department. ▶ A copy of the document outlining how to hire a contractor on file in the Building Inspections Department. 			
<p>Implementation Schedule</p>				
<p>Year 1</p>	<p>Year 2</p>	<p>Year 3</p>	<p>Year 4</p>	<p>Year 5</p>
	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>



Strategy #7	Caldwell County and all participating jurisdictions will continue to maintain all property acquired within the SFHA as undisturbed open space in perpetuity. All parties will continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.			
Action New/Revised	New			
Applicable Jurisdictions	Caldwell County, Town of Cahaj's Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	420: Open Space Preservation			
Estimated CRS Points	37.5			
Objectives Addressed	2.1, 2.2, 3.1, 3.2			
Priority	High			
Hazards Addressed	Flooding, dam/levee failure, wildfire			
Possible Funding Sources	Grant Fund Resources (see Appendix H for a comprehensive listing of grant programs that may be utilized in the implementation of this plan.)			
Responsibility	Primary Responsible Party: Caldwell County Board of Commissioners 828/757-1300 Secondary Responsible Party: Elected Boards of all participating jurisdictions			
CRS Documentation	The Caldwell County Planning Department shall maintain the following information: <ul style="list-style-type: none"> ▶ A copy of all deed restrictions in place for all properties acquired through FEMA sponsored acquisition projects. ▶ A map showing all open space parcels within the County. 			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #8	The Caldwell County Planning Department will maintain a comprehensive Geographic Information System (GIS) with current FIRM panels in an effort to make this information readily available to County citizens. In addition to this digital data, bound copies of all historical and current FIRM panels will be maintained within the Caldwell County Planning Department.			
Action New/Revised	Revised			
Applicable Jurisdictions	Unincorporated Caldwell County (this may be expanded if any of the participating jurisdictions join the CRS program)			
CRS Activity	440: Flood Data Maintenance			
Estimated CRS Points	149			
Objectives Addressed	3.1, 5.1			
Priority	High			
Hazards Addressed	Flooding, dam/levee failure			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Planning Department 828/757-6855 Secondary Responsible Party: Caldwell County Information Technology 828/757-1355			
CRS Documentation	The Caldwell County Planning Department shall maintain the following information: <ul style="list-style-type: none"> • A hard copy of all digital tax parcel records maintained by the GIS. • A summary of data included within the County's GIS system. 			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #9	The Caldwell County Mitigation Advisory Committee (MAC), in conjunction with all municipal jurisdictions participating in this plan update, will work on the five-year implementation of this Hazard Mitigation Plan Update. At the end of the five-year period, the County will again update the plan.			
Action New/Revised	Revised			
Applicable Jurisdictions	Caldwell County, Town of Cahaj's Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	510: Floodplain Management Planning			
Estimated CRS Points	359			
Objectives Addressed	1.1, 1.2, 1.3, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 4.1, 5.1, 5.2, 6.1, 7.1			
Priority	High			
Hazards Addressed	Wildfire, landslides, flooding, severe winter storms, severe thunderstorms and windstorms, tornados, dam/levee failure			
Possible Funding Sources	Funding for annual maintenance and implementation of the hazard mitigation plan will be provided through the Caldwell County annual budget ordinance.			
Responsibility	Primary Responsible Party: Caldwell County Emergency Services 828/757-1424 Secondary Responsible Party: Caldwell County Mitigation Advisory Committee			
CRS Documentation	A copy of the current Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #10	Caldwell County, as well as all participating jurisdictions, will continue to support the NC Office of Dam Safety efforts to monitor and inspect all dams throughout the County, as well as the State of North Carolina. The County relies on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable.			
Action New/Revised	Revised			
Applicable Jurisdictions	Caldwell County, Town of Cahah’s Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	630: Dam Safety			
Estimated CRS Points	75			
Objectives Addressed	3.1, 3.3			
Priority	High			
Hazards Addressed	Flooding, dam/levee failure			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Emergency Services 828/757-1424 Secondary Responsible Party: Administrative staff of all participating jurisdictions Town of Cahah’s Mountain 828/728-5053 Town of Gamewell 828/754-1991 Village of Cedar Rock 828/757-4545 Town of Granite Falls 828/396-3131 Town of Sawmills 828/396-3131 City of Lenoir 828/396-7903 Town of Hudson 828-728-8272 Town of Rhodhiss 828/396-8400			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #11	Caldwell County will maintain participation in the Community Rating System (CRS) Program. Additionally, Caldwell County will work with all participating jurisdictions, upon request, to secure inclusion in the CRS program. Currently, only unincorporated Caldwell County is a participant in the program.			
Action New/Revised	Revised			
Applicable Jurisdictions	Unincorporated Caldwell County (this may be expanded if any of the participating jurisdictions join the CRS program)			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	2.1, 3.1, 3.3, 7.1			
Priority	Medium			
Hazards Addressed	Flooding, dam/levee failure			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Planning Department 828/757-6855 Secondary Responsible Party: Elected Boards of all participating jurisdictions			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
		X	X	X



Strategy #12	Caldwell County Emergency Management will continue to work closely with the American Red Cross on the management and, when necessary, operation of emergency shelter facilities within the County. The County will operate only in a support role in dealing with individual shelter issues.			
Action New/Revised	New			
Applicable Jurisdictions	Caldwell County			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	1.1, 1.2			
Priority	High			
Hazards Addressed	All hazards			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Emergency Services 858/757-1424 Secondary Responsible Party: American Red Cross 828/754-4161			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



Strategy #13	Caldwell County will work with the American Red Cross, and will attempt to obtain funding for locating switches and generators at all emergency shelter locations.			
Action New/Revised	New			
Applicable Jurisdictions	Caldwell County			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	1.1, 1.2			
Priority	Medium			
Hazards Addressed	All hazards			
Possible Funding Sources	Existing department and staff resources or grant funding (see Appendix H)			
Responsibility	Primary Responsible Party: Caldwell County Emergency Services 828/757-1424 Secondary Responsible Party: American Red Cross 828/754-4161			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



Strategy #14	Caldwell County Emergency Management will continue to coordinate with the County Public Works Department, as well as all participating jurisdictions, regarding the monitoring of water resources statewide. When necessary the County will institute measures to conserve water resources according to the County's Drought Management Plan.			
Action New/Revised	New			
Applicable Jurisdictions	Caldwell County, Town of Cahah's Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	7.1			
Priority	High			
Hazards Addressed	Drought			
Possible Funding Sources	Existing department and staff resources			
Responsibility	<p>Primary Responsible Party: Caldwell County Water Department 828/757-6865</p> <p>Secondary Responsible Party: Administrative staff of all participating jurisdictions Town of Cahah's Mountain 828/728-5053 Town of Gamewell 828/754-1991 Village of Cedar Rock 828/757-4545 Town of Granite Falls 828/396-3131 Town of Sawmills 828/396-3131 City of Lenoir 828/396-7903 Town of Hudson 828/728-8272 Town of Rhodhiss 828/396-8400</p>			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #15	Caldwell County, as well as all participating jurisdictions, will maintain a contract with a qualified post-disaster recovery service provider. This contract will include the provision of essential services and equipment, including generators, and will include documentation required for reimbursement from FEMA/NCEM.			
Action New/Revised	New			
Applicable Jurisdictions	Caldwell County, Town of Cahaj's Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	1.3, 3.2, 4.1, 5.2			
Priority	Medium			
Hazards Addressed	All hazards			
Possible Funding Sources	Existing department and staff resources			
Responsibility	<p>Primary Responsible Party: Caldwell County Emergency Services 828/757-1424</p> <p>Secondary Responsible Party: Administrative staff of all participating jurisdictions Town of Cahaj's Mountain 828/728-5053 Town of Gamewell 828/754-1991 Village of Cedar Rock 828/757-4545 Town of Granite Falls 828/396-3131 Town of Sawmills 828/396-3131 City of Lenoir 828/396-7903 Town of Hudson 828-728-8272 Town of Rhodhiss 828/396-8400</p>			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #16	Caldwell County will assist all communities within the County, including property owners in unincorporated areas, in applying for FEMA-sponsored mitigation grant assistance for the acquisition and/or elevation of substantially damaged structures following a natural disaster.			
Action New/Revised	Revised			
Applicable Jurisdictions	Caldwell County, Town of Cajah’s Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	3.2, 7.1			
Priority	Medium			
Hazards Addressed	All hazards			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Emergency Services 828/757-1424 Secondary Responsible Party: Elected boards of all participating jurisdictions			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #17	Caldwell County Emergency Services will continue to work on the establishment of a comprehensive special needs registry. This effort will involve the cooperation of all participating jurisdictions.			
Action New/Revised	Revised			
Applicable Jurisdictions	Caldwell County, Town of Cahah’s Mountain, Town of Gamewell, Village of Cedar Rock, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson, Town of Rhodhiss			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	1.1, 1.2, 5.1, 7.1			
Priority	High			
Hazards Addressed	All Hazards			
Possible Funding Sources	Existing department and staff resources			
Responsibility	<p>Primary Responsible Party: Caldwell County Emergency Services 828/757-1424</p> <p>Secondary Responsible Party: Administrative staff of all participating jurisdictions Town of Cahah’s Mountain 828/728-5053 Town of Gamewell 828/754-1991 Village of Cedar Rock 828/757-4545 Town of Granite Falls 828/396-3131 Town of Sawmills 828/396-3131 City of Lenoir 828/396-7903 Town of Hudson 828-728-8272 Town of Rhodhiss 828/396-8400</p>			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #18	The City of Lenoir will continue to serve an administrative role in the implementation and enforcement of the County's comprehensive stormwater management program. The stormwater regulations outlined within this program shall apply to Gamewell, Cahah's Mountain, Lenoir, Hudson, Sawmills, and Granite Falls.			
Action New/Revised	New			
Applicable Jurisdictions	Caldwell County, Town of Cahah's Mountain, Town of Gamewell, Town of Granite Falls, Town of Sawmills, City of Lenoir, Town of Hudson			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	3.1, 6.1			
Priority	High			
Hazards Addressed	Flooding, dam/levee failure			
Possible Funding Sources	Existing department and staff resources			
Responsibility	<p>Primary Responsible Party: City of Lenoir Planning and Building Inspections 828/757-2200 x3017</p> <p>Secondary Responsible Party: Administrative staff of Caldwell County and all participating jurisdictions Caldwell County 828/787-6855 Town of Cahah's Mountain 828/728-5053 Town of Gamewell 828/754-1991 Town of Granite Falls 828/396-3131 Town of Sawmills 828/396-3131 Town of Hudson 828-728-8272</p>			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



Strategy #19	Caldwell County will consider the development and adoption of a slope control ordinance based on the findings outlined within this plan.			
Action New/Revised	Revised			
Applicable Jurisdictions	Caldwell County			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	2.2, 3.1			
Priority	Medium			
Hazards Addressed	Landslides			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Planning Department 828/757-6855 Secondary Responsible Party: Caldwell County Board of Commissioners 828/757-1300			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



Strategy #20	The Town of Granite Falls will aim to draft a comprehensive Parks and Recreation Plan over the next five years. This plan will incorporate recommendations regarding the purchase and development of flood prone land for recreational purposes.			
Action New/Revised	Revised			
Applicable Jurisdictions	Town of Granite Falls			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	2.1, 3.1, 4.1, 7.1			
Priority	Medium			
Hazards Addressed	Flooding, dam/levee failure, wildfire			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Town of Granite Falls Town Council 828/396-3131 Secondary Responsible Party: Town of Granite Falls Administrative Staff 828/396-3131			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



Strategy #21	Consideration of adoption or refinement of a Capital Improvements Program (CIP).			
Action New/Revised	Ongoing			
Applicable Jurisdictions	Town of Gamewell and Town of Hudson			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	1.3, 4.1, 6.1			
Priority	Medium			
Hazards Addressed	Flooding, dam/levee failure, tornadoes, severe winter weather			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Town of Gamewell Elected Board 828/754-1991 Town of Hudson Elected Board 828/728-8272 Secondary Responsible Party: Town of Gamewell Administrative Staff 828/754-1991 Town of Hudson Administrative Staff 828/728-8272			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



Strategy #22	In an effort to incorporate discussions relating to the provision of electric service during or following natural hazard events, Caldwell County will consider inviting a staff member from each of the electric service providers operating in the County to attend and participate in all Local Emergency Planning Commission (LEPC) meetings.			
Action New/Revised	Revised			
Applicable Jurisdictions	Caldwell County			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	1.3			
Priority	Medium			
Hazards Addressed	Flooding, dam/levee failure, severe winter weather, severe thunderstorms/windstorms			
Possible Funding Sources	Existing department and staff resources			
Responsibility	Primary Responsible Party: Caldwell County Emergency Services 828/757-1424 Secondary Responsible Party: Electric Service Providers			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



Strategy #23	<p>In order to provide comprehensive and effective emergency response services to all Town residents, the Town of Rhodhiss will take steps to update and/or acquire the following equipment over the course of the next five years:</p> <ul style="list-style-type: none"> ▶ One new fire truck ▶ Emergency communication equipment (hand held radios) ▶ Rescue tools (per the recommendation of Caldwell County Emergency Services) ▶ One Set of Jaws of Life (Hurst Tools) <p>It should also be noted that the Town of Rhodhiss needs to rehabilitate the Town's existing fire department, or build a new facility. This effort will involve the replacement of all equipment.</p>			
Action New/Revised	New			
Applicable Jurisdictions	Town of Rhodhiss			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	3.3, 4.1			
Priority	Low			
Hazards Addressed	All hazards			
Possible Funding Sources	Grant Funding (See Appendix H)			
Responsibility	<p>Primary Responsible Party: Town of Rhodhiss Town Council 828/396-8400</p> <p>Secondary Responsible Party: Caldwell County Emergency Services 828/757-1424</p>			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
	X	X	X	X



Strategy #24	<p>The Town of Rhodhiss has several infrastructure components that are located within flood prone areas including: 2 pump stations and the towns water treatment plant. The Town will continue to monitor these facilities, and when feasible will work to relocate these facilities to a location that is not susceptible to flooding.</p> <p>*It should be noted that the Town of Rhodhiss is working with the Town of Granite Falls to establish a solution whereby the existing water treatment plant may be abandoned and demolished. This effort is contingent on grant funding.</p>			
Action New/Revised	Revised			
Applicable Jurisdictions	Town of Rhodhiss			
CRS Activity	N/A			
Estimated CRS Points	N/A			
Objectives Addressed	3.1, 3.2			
Priority	Medium			
Hazards Addressed	Flooding, dam/levee failure			
Possible Funding Sources	Grant Funding (See Appendix H)			
Responsibility	<p>Primary Responsible Party: Town of Rhodhiss Town Council 828/396-8400</p> <p>Secondary Responsible Party: Town of Rhodhiss Administrative Staff 828-396-8400</p>			
CRS Documentation	No documentation required.			
Implementation Schedule				
Year 1	Year 2	Year 3	Year 4	Year 5
X	X	X	X	X



SECTION 7. PLAN MAINTENANCE AND IMPLEMENTATION PROCEDURES

A. Introduction

The Plan Maintenance and Implementation Procedures section of the plan has been completely revised to reflect the County's intentions for implementation, maintenance, and public participation over the next five years. It was determined by the MAC that this section should be revised through each update to better define these issues and appropriately lay out a plan for implementation.

B. Implementation

Implementation of the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan will commence with adoption of the document by the County and all participating jurisdictions. Resolutions of Adoption are provided as Appendix D of the plan.

Upon adoption, the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan faces the truest test of its worth, implementation. Implementation implies two concepts: action and priority. These are closely related. While this plan puts forth many worthwhile and high priority recommendations, the decision about which action to undertake first will be the first task facing the Mitigation Advisory Committee (MAC). There are two factors to consider in making that decision; the priority of the item and available funding. Thus, pursuing low or no-cost high-priority recommendations will have the greatest likelihood of success. The mitigation strategies outlined within Section 6 of the plan provides a priority based on these factors, and will serve as a guide for the MAC.

Another important implementation mechanism that is highly effective and low-cost is incorporation of the hazard mitigation plan recommendations and their underlying principles into other county and municipal plans and regulatory mechanisms, such as Capital Improvements Plans and Land Use Plans. The County and participating municipalities will utilize this plan as a starting point toward implementing policies and programs to reduce losses to life and property from natural hazards.

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

Simultaneous to these efforts, it is important to maintain a constant monitoring of funding opportunities that can be leveraged to implement some of the more costly recommended actions.



This will include creating and maintaining a bank of ideas on how any required local match or participation requirement can be met. When funding does become available, the MAC will be in a position to capitalize on the opportunity. Funding opportunities to be monitored include special pre- and post-disaster funds, special district budgeted funds, state or federal earmarked funds, and grant programs, including those that can serve or support multi-objective implementing actions.

C. Role of the Mitigation Advisory Committee in Implementation and Maintenance

With adoption of this plan, the MAC will be tasked with plan implementation and maintenance. The MAC, led by Trevor Key of the Caldwell County Emergency Services office, agrees to:

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

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

D. Evaluation, Monitoring, and Updating

Plan maintenance implies an ongoing effort to monitor and evaluate plan implementation and to update the plan as progress, roadblocks, or changing circumstances are recognized.

In order to track progress and update the mitigation strategies identified in the policy section of the plan, the County will revisit this plan on a bi-annual basis and after a hazard event. The Emergency Services Director is responsible for initiating this review and will consult with members of the MAC. This monitoring and updating will take place through a formal review by the MAC twice annually,



and a five-year written update to be submitted to the NCEM and FEMA Region IV, unless disaster or other circumstances (e.g., changing regulations) require a change to this schedule.

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

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

Updates to this plan will:

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

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

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

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

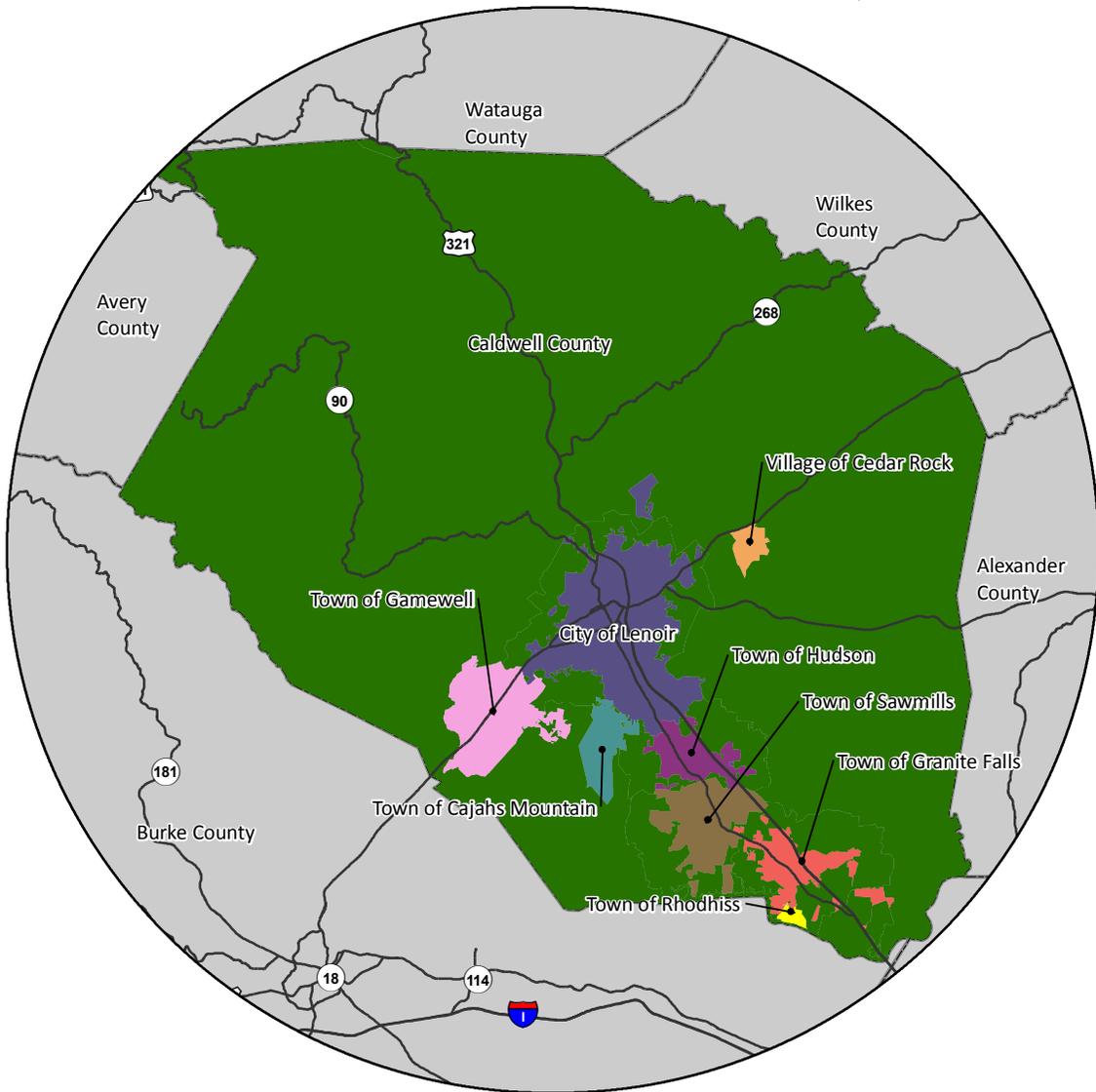
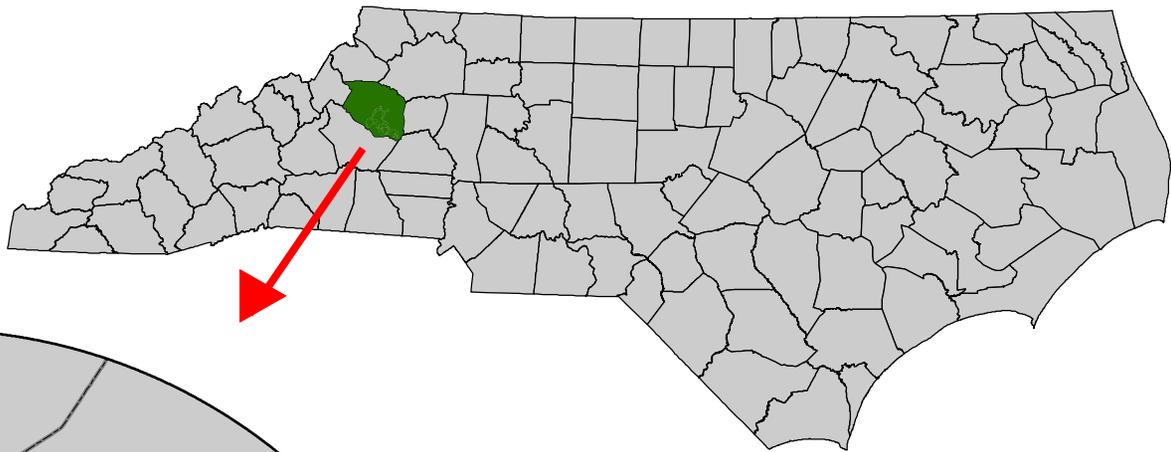


Updating of the plan will be by written changes and submissions, as the MAC deems appropriate and necessary, and as approved by the Caldwell County Board of Commissioners or the participating jurisdictions' governing board, if applicable. In keeping with the process of adopting the plan, a public involvement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

E. Continued Public Involvement

Continued public involvement is also imperative to the overall success of the plan's implementation. The update process provides an opportunity to publicize success stories from plan implementation and seek additional public comment. A public hearing(s) to receive public comment on plan maintenance and updating will be held once within the context of the defined bi-annual review process. When the MAC reconvenes for updates, they will coordinate with all stakeholders participating in the planning process – including those that joined the committee since the planning process began (if applicable). The plan maintenance and update process will include continued public and stakeholder involvement and input through attendance at designated committee meetings, web postings, and press releases to local media.

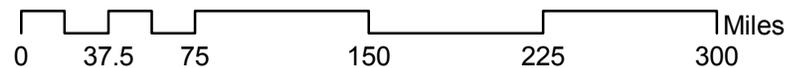
APPENDIX A MAPS



Caldwell County, NC
Hazard Mitigation Plan
Regional Location



Map 1



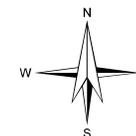
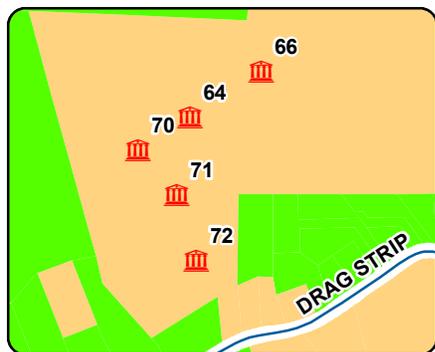
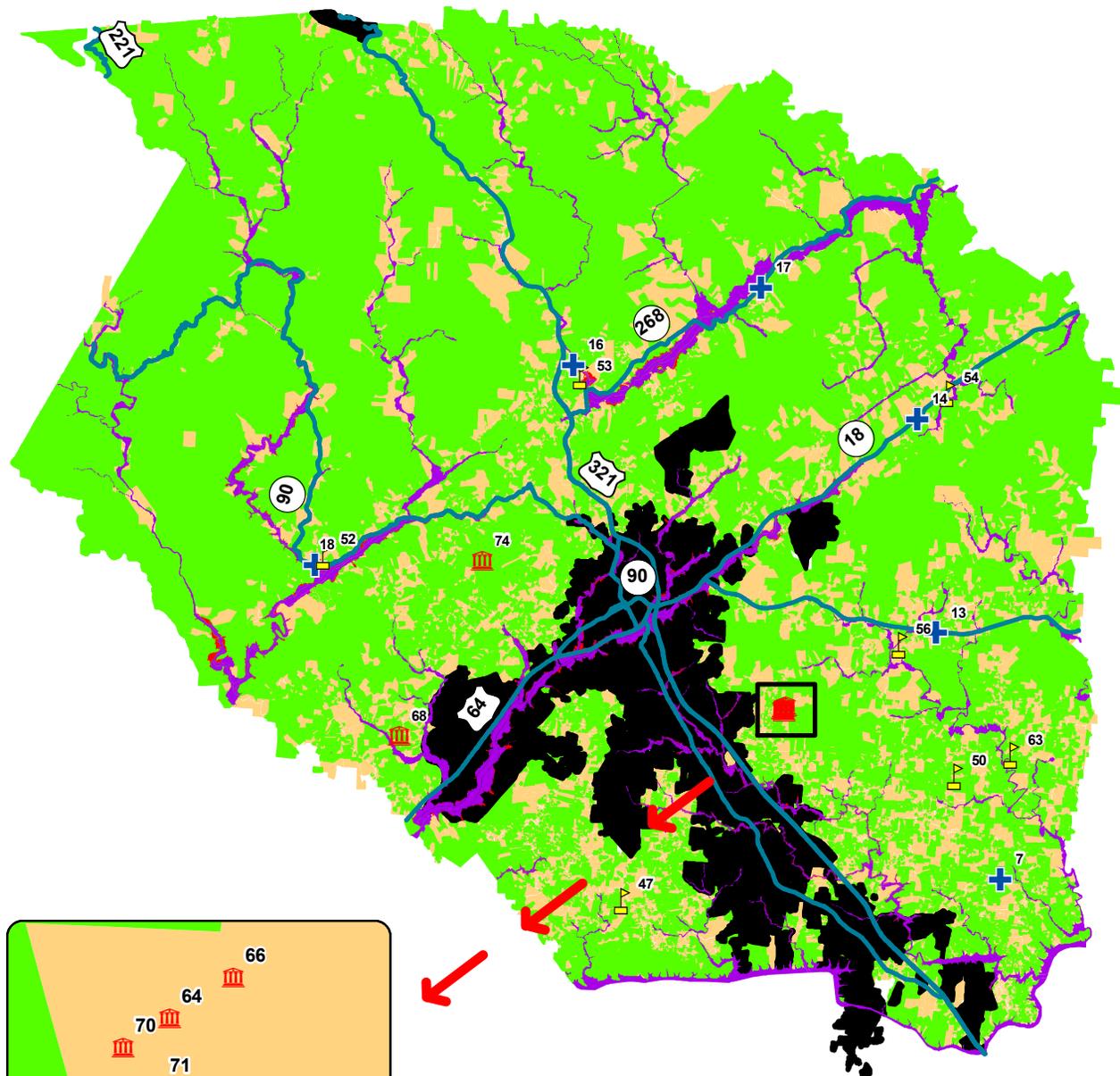
Caldwell County Hazard Mitigation Plan



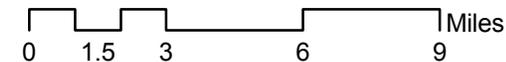
Unincorporated County

Legend

- Municipalities
- Primary Roads
- Critical Facilities**
 - County/Municipal Facilities
 - Medical/Fire/Police
 - Schools
- Flood Zone**
 - X-500
 - A
 - AE
- Land Use**
 - Developed
 - Undeveloped



1 inch = 4 miles



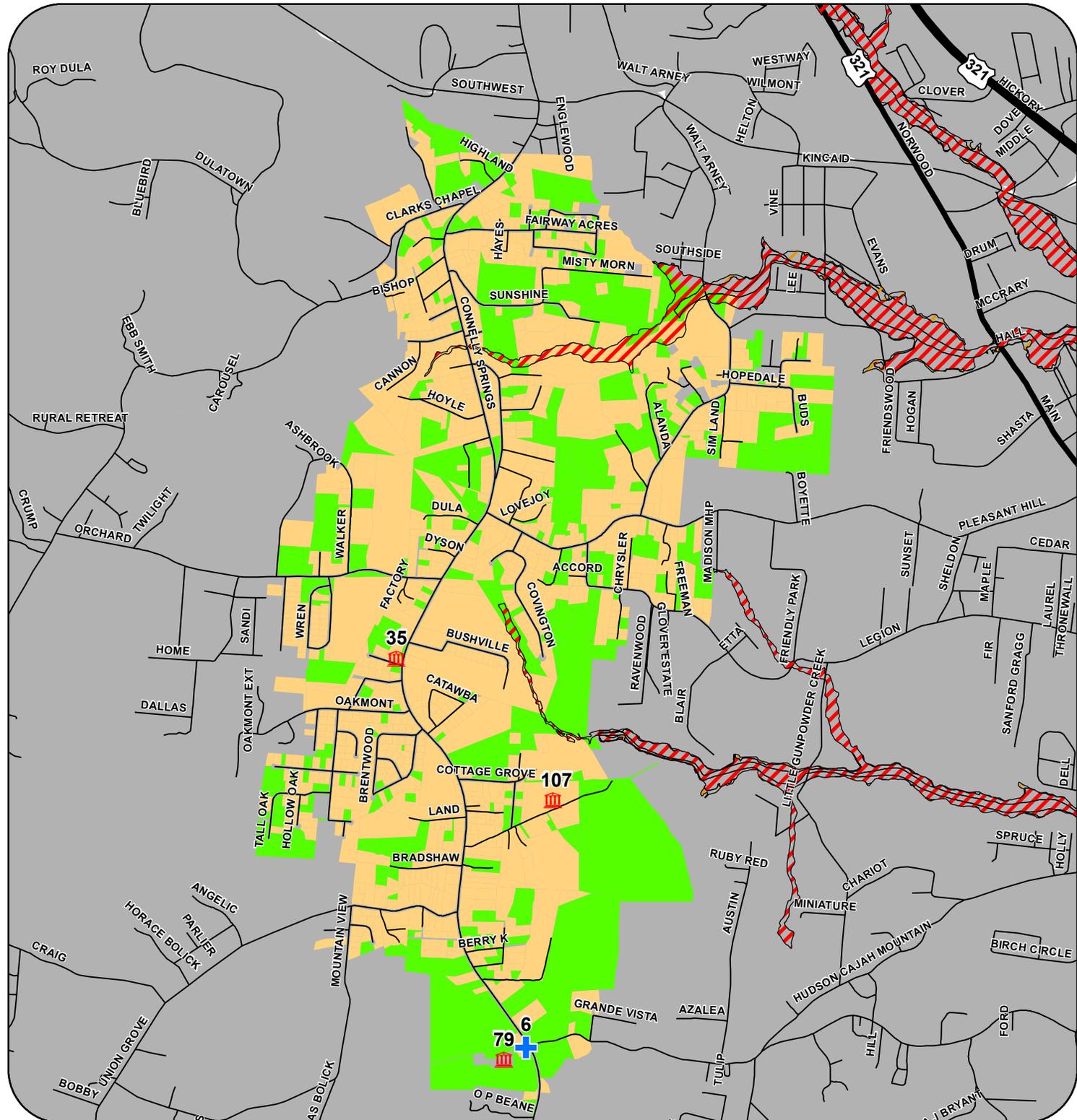
Map 2B
**Caldwell County
 Hazard Mitigation Plan**



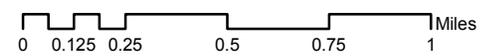
Town of Cajah's Mountain

Legend

- Roads
- Critical Facilities**
 - County/Municipal Facilities
 - Medical/Fire/Police
- Flood Zones**
 - X-500
 - A
 - AE
- Land Use**
 - Developed
 - Undeveloped



1 inch = 2,471 feet



Map 2C
**Caldwell County
 Hazard Mitigation Plan**



Village of Cedar Rock

Legend

Roads

Land Use

Developed

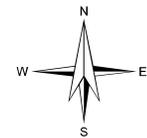
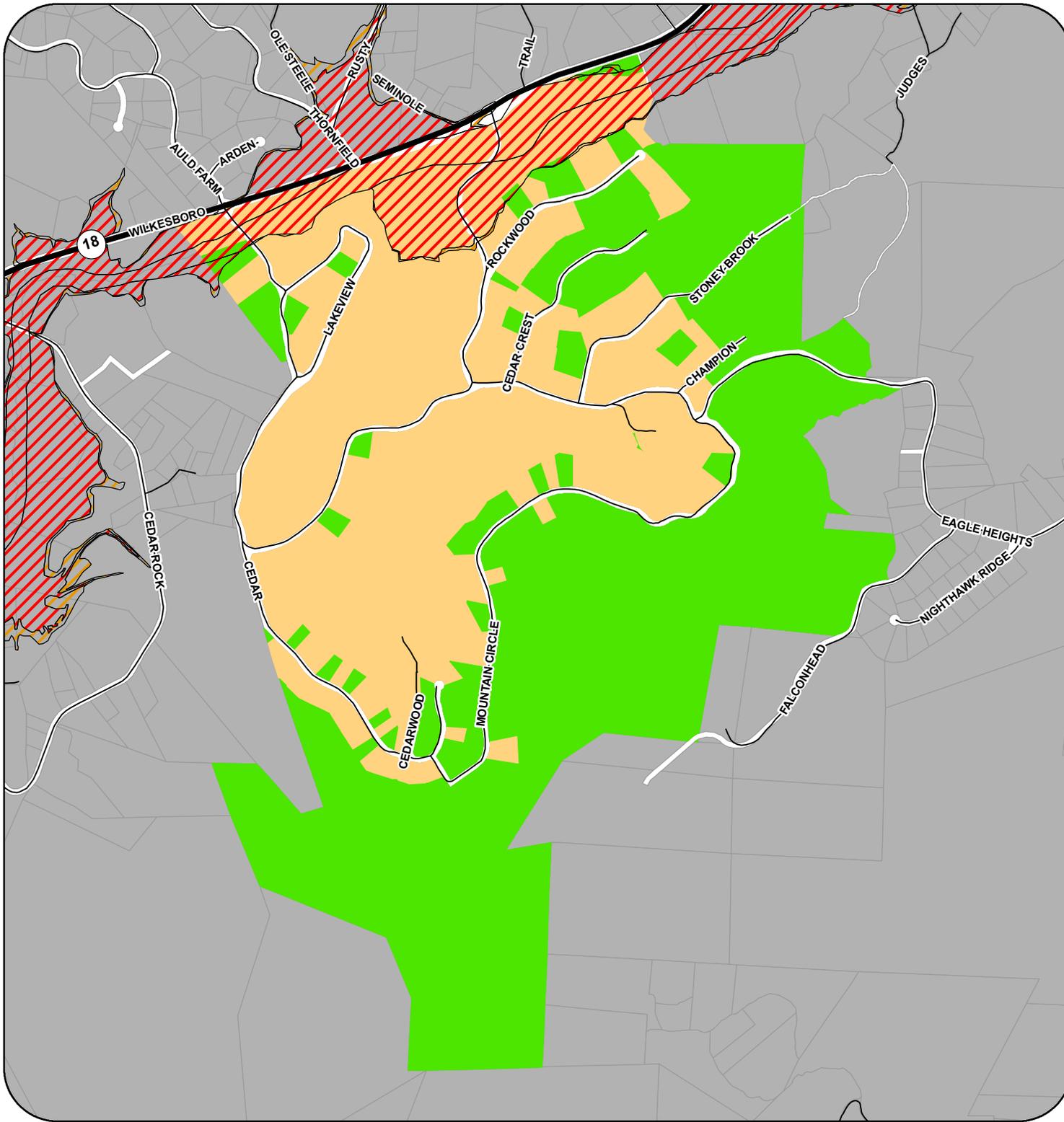
Undeveloped

Flood Zones

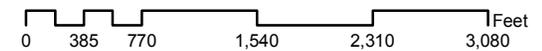
X-500

A

AE



1 inch = 1,272 feet



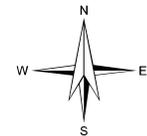
Map 2D
**Caldwell County
 Hazard Mitigation Plan**



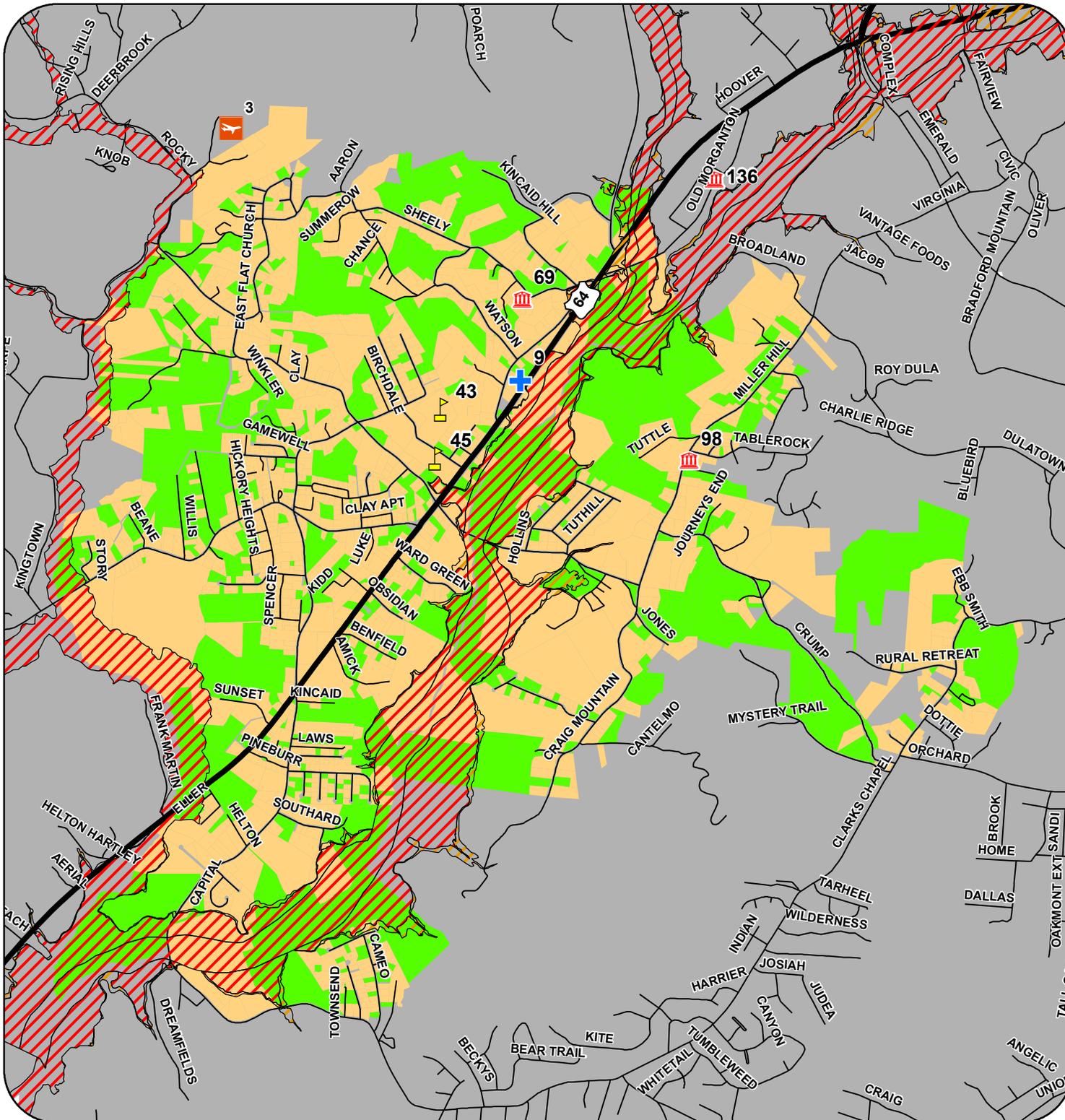
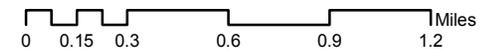
Town of Gamewell

Legend

- Roads
- Critical Facilities**
 - County/Municipal Facilities
 - Medical/Fire/Police
 - Schools
 - Airports
- Land Use**
 - Developed
 - Undeveloped
- Flood Zones**
 - X-500
 - A
 - AE



1 inch = 2,986 feet



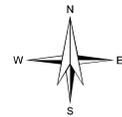
Map 2E
Caldwell County
Hazard Mitigation Plan



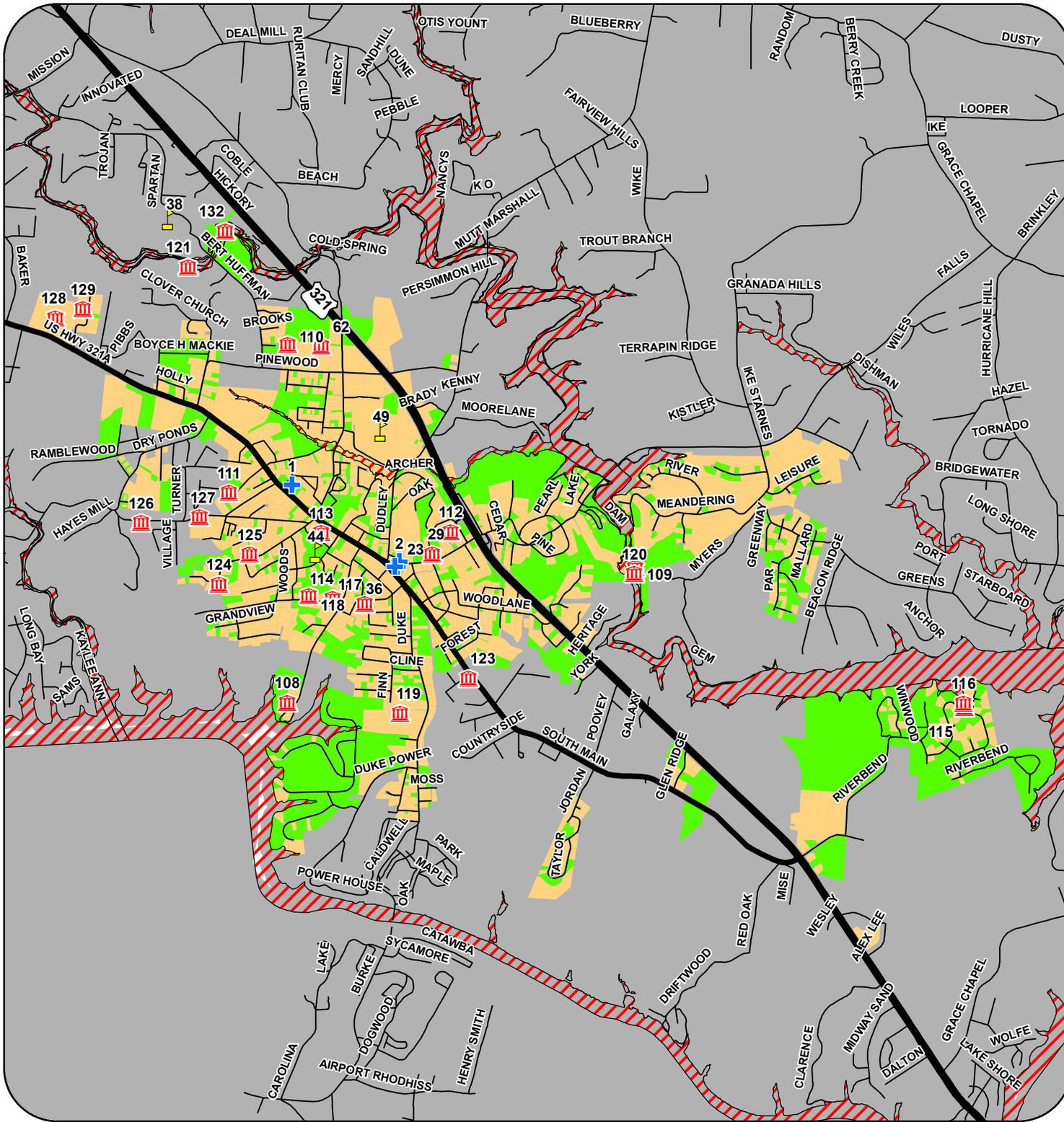
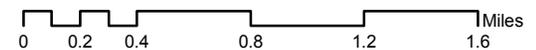
Town of Granite Falls

Legend

- Roads
- Critical Facilities**
 - County/Municipal Facilities
 - Medical/Fire/Police
 - Schools
- Flood Zones**
 - X-500
 - A
 - AE
- Land Use**
 - Developed
 - Undeveloped



1 inch = 3,554 feet



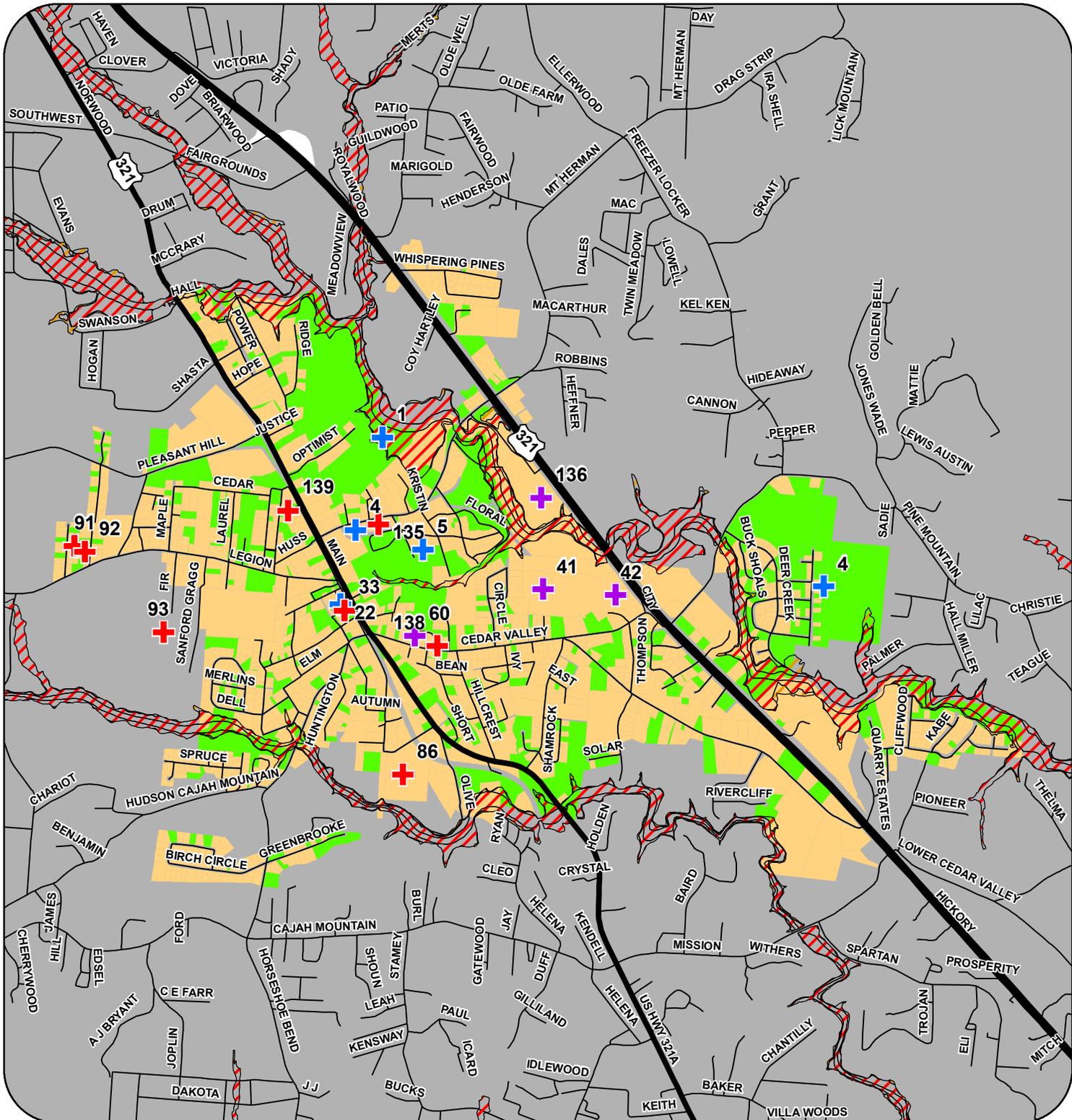
Map 2F
Caldwell County
Hazard Mitigation Plan



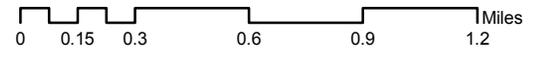
Town of Hudson

Legend

- Roads
- Critical Facilities**
 - County/Municipal Facilities
 - Medical/Fire/Police
 - Schools
- Flood Zones**
 - X-500
 - A
 - AE
- Land Use**
 - Developed
 - Undeveloped



1 inch = 2,654 feet



Map 2G
**Caldwell County
 Hazard Mitigation Plan**



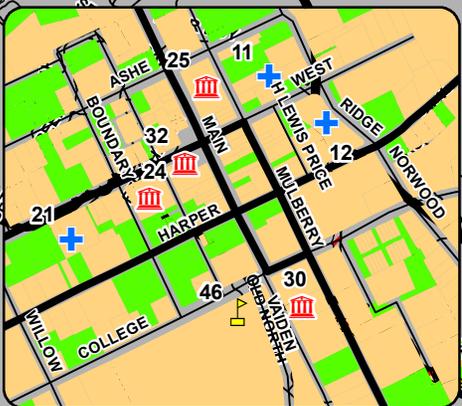
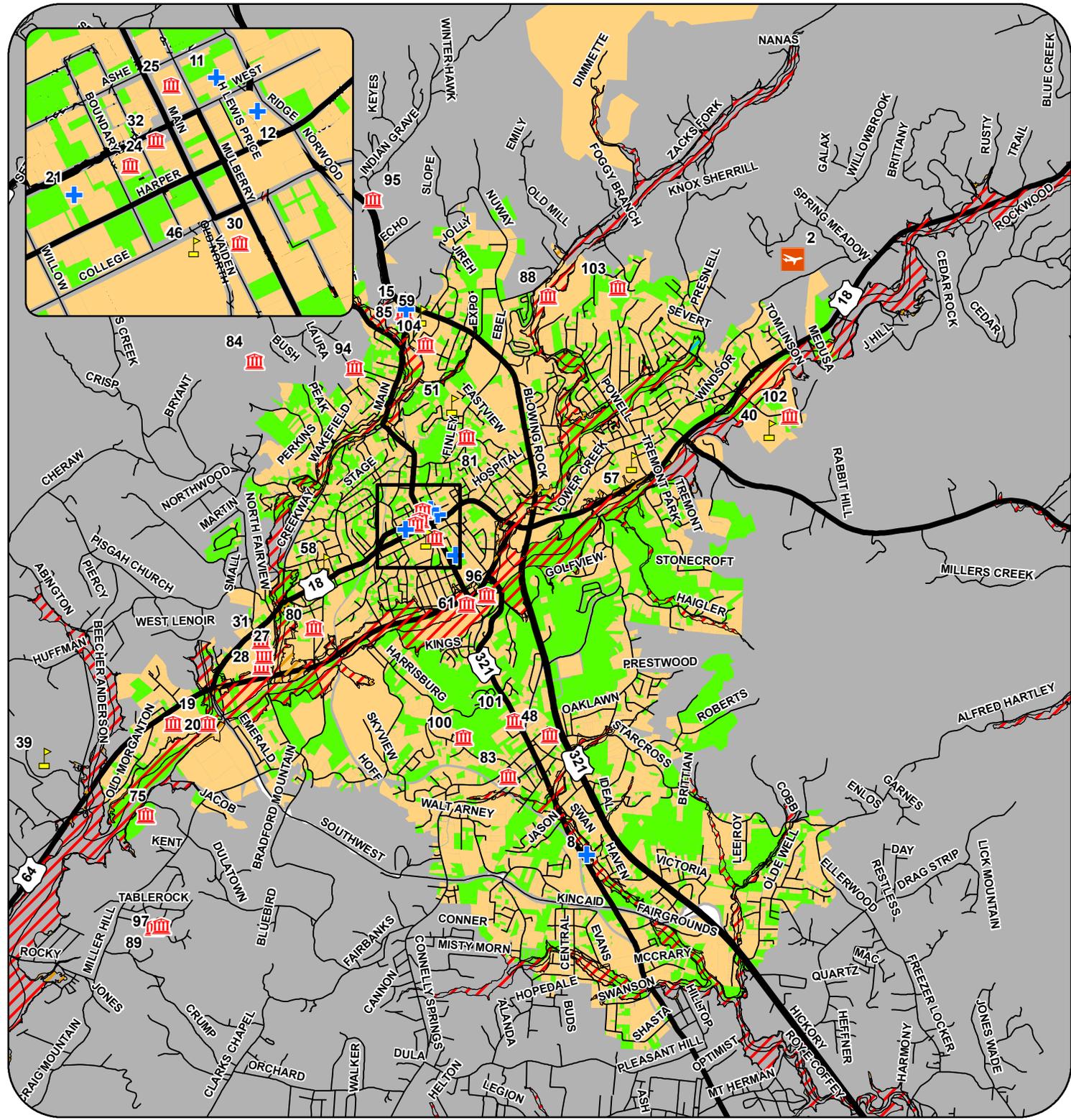
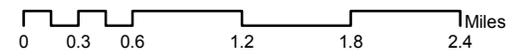
City of Lenoir

Legend

- Roads
- Critical Facilities**
 - County/Municipal Facilities
 - Medical/Fire/Police
 - Schools
 - Airports
- Flood Zones**
 - X-500
 - A
 - AE
- Land Use**
 - Developed
 - Undeveloped



1 inch = 1.05 miles



Map 211
Caldwell County
Hazard Mitigation Plan



Town of Rhodhiss

Legend

Critical Facilities



County/Municipal Facilities

Flood Zones



X-500



A



AE

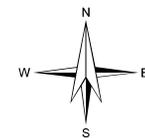
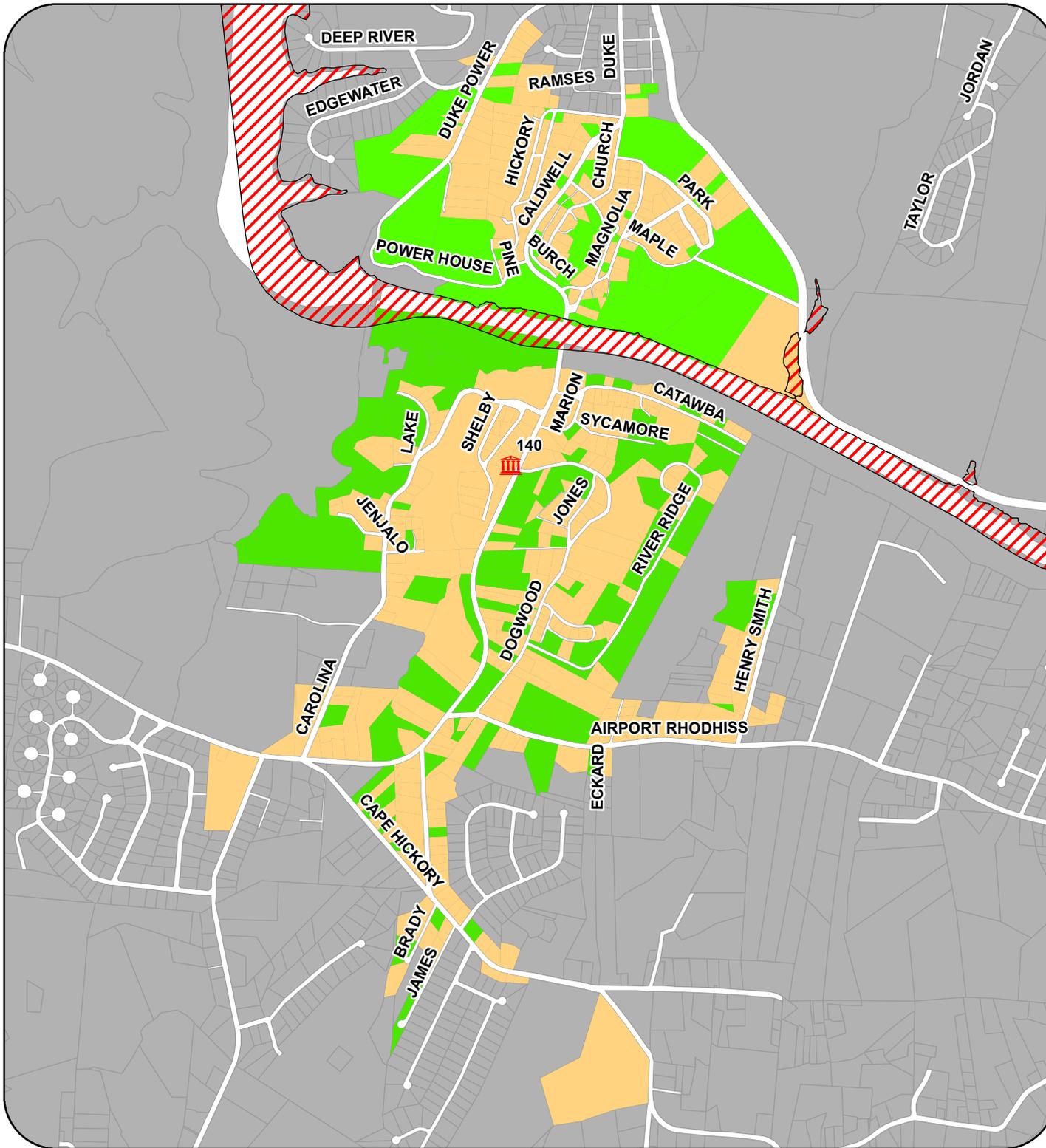
Land Use



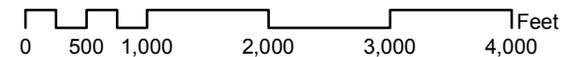
Developed



Undeveloped



1 inch = 1,574 feet



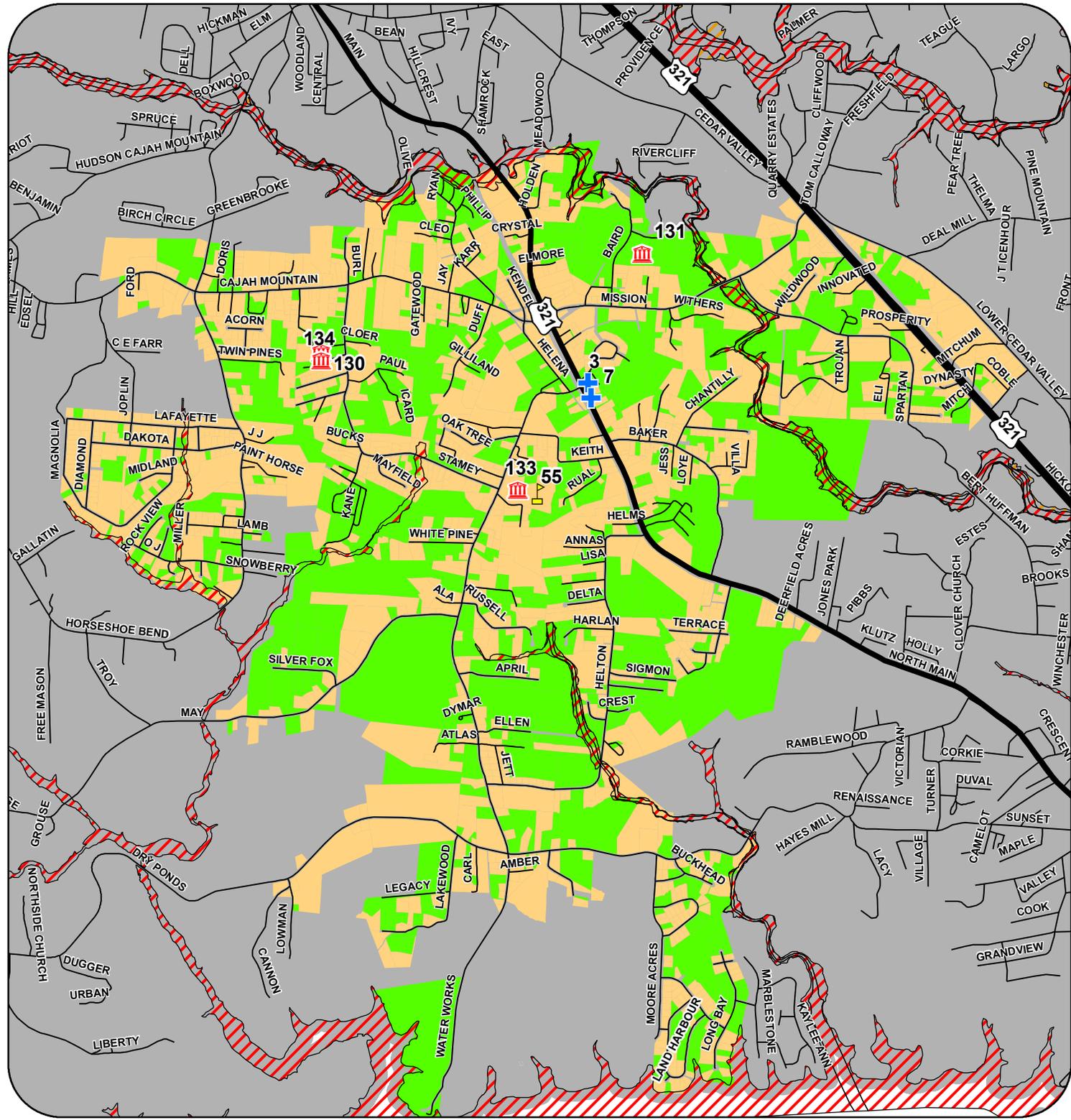
Map 21
Caldwell County
Hazard Mitigation Plan



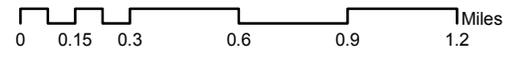
Town of Sawmills

Legend

- Roads
- Critical Facilities**
 - County/Municipal Facilities
 - Medical/Fire/Police
 - Schools
- Flood Zones**
 - X-500
 - A
 - AE
- Land Use**
 - Developed
 - Undeveloped



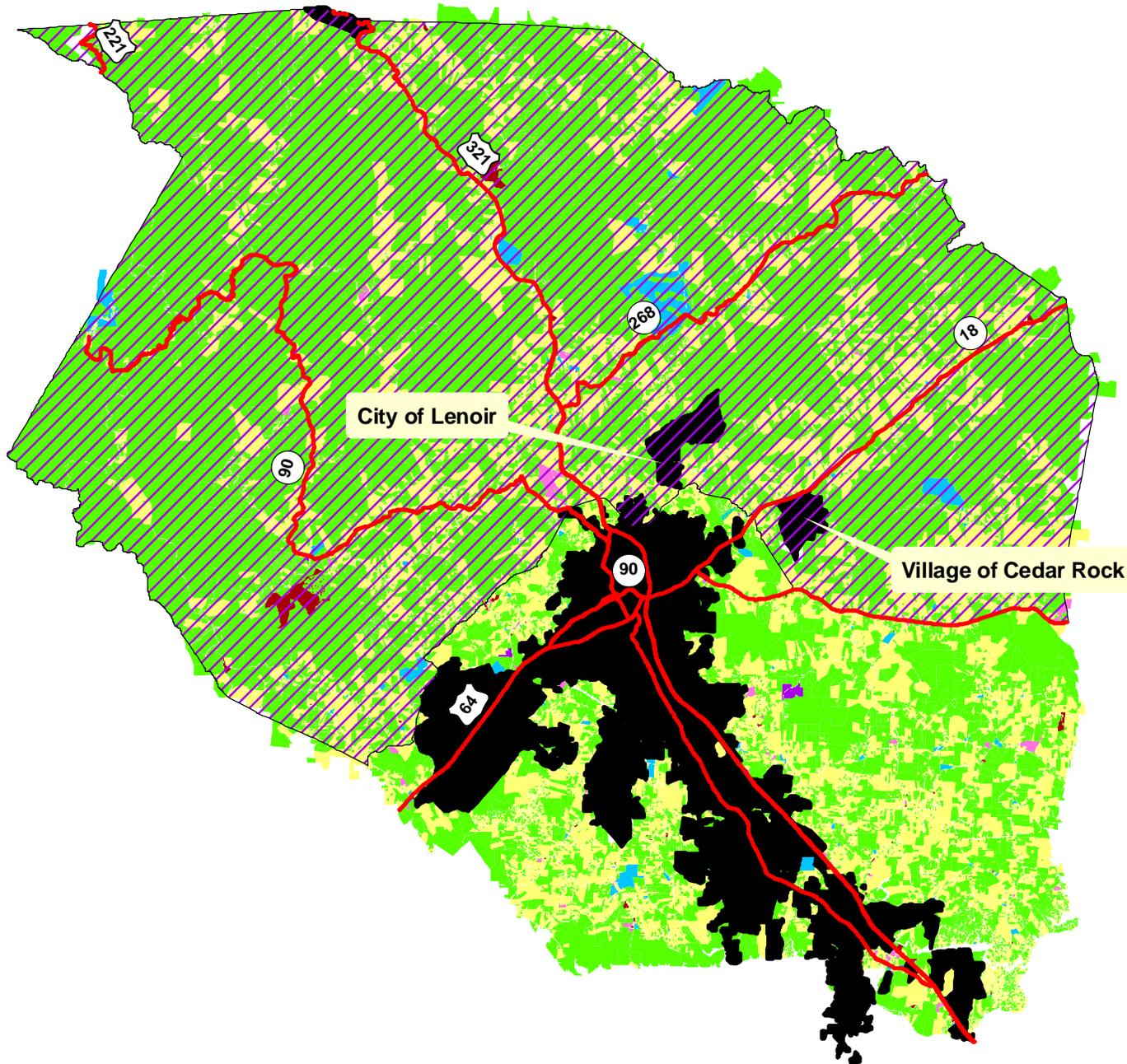
1 inch = 2,772 feet



Caldwell County Hazard Mitigation Plan

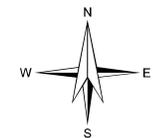


Unincorporated County

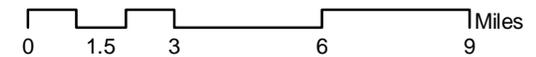


Legend

- Municipalities
- Primary Roads
- Wildfire Risk
- Land Use**
- Vacant
- Residential
- Commercial
- Office & Institutional
- Industrial
- Other



1 inch = 4 miles



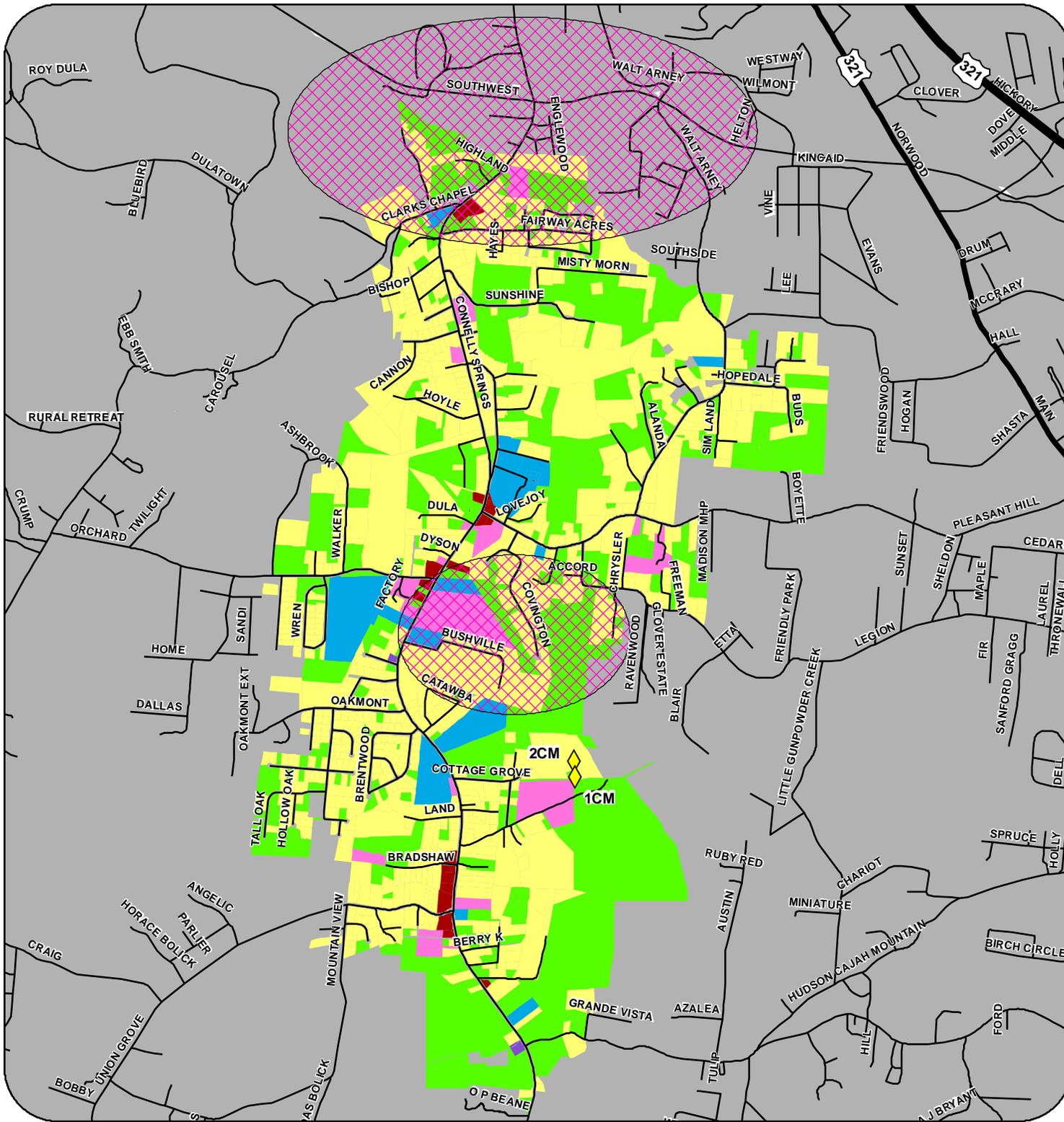
Map 3B
Caldwell County
Hazard Mitigation Plan



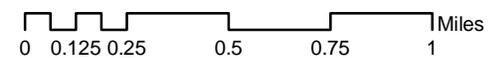
Town of Cajah's Mountain

Legend

- Roads
 - ANHRE
 - Areas of Anticipated Growth
- Land Use**
- Vacant
 - Residential
 - Commercial
 - Office & Institutional
 - Industrial
 - Other



1 inch = 2,471 feet



Map 3C
**Caldwell County
Hazard Mitigation Plan**



Town of Cedar Rock

Legend

 Roads

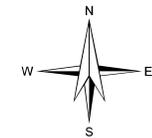
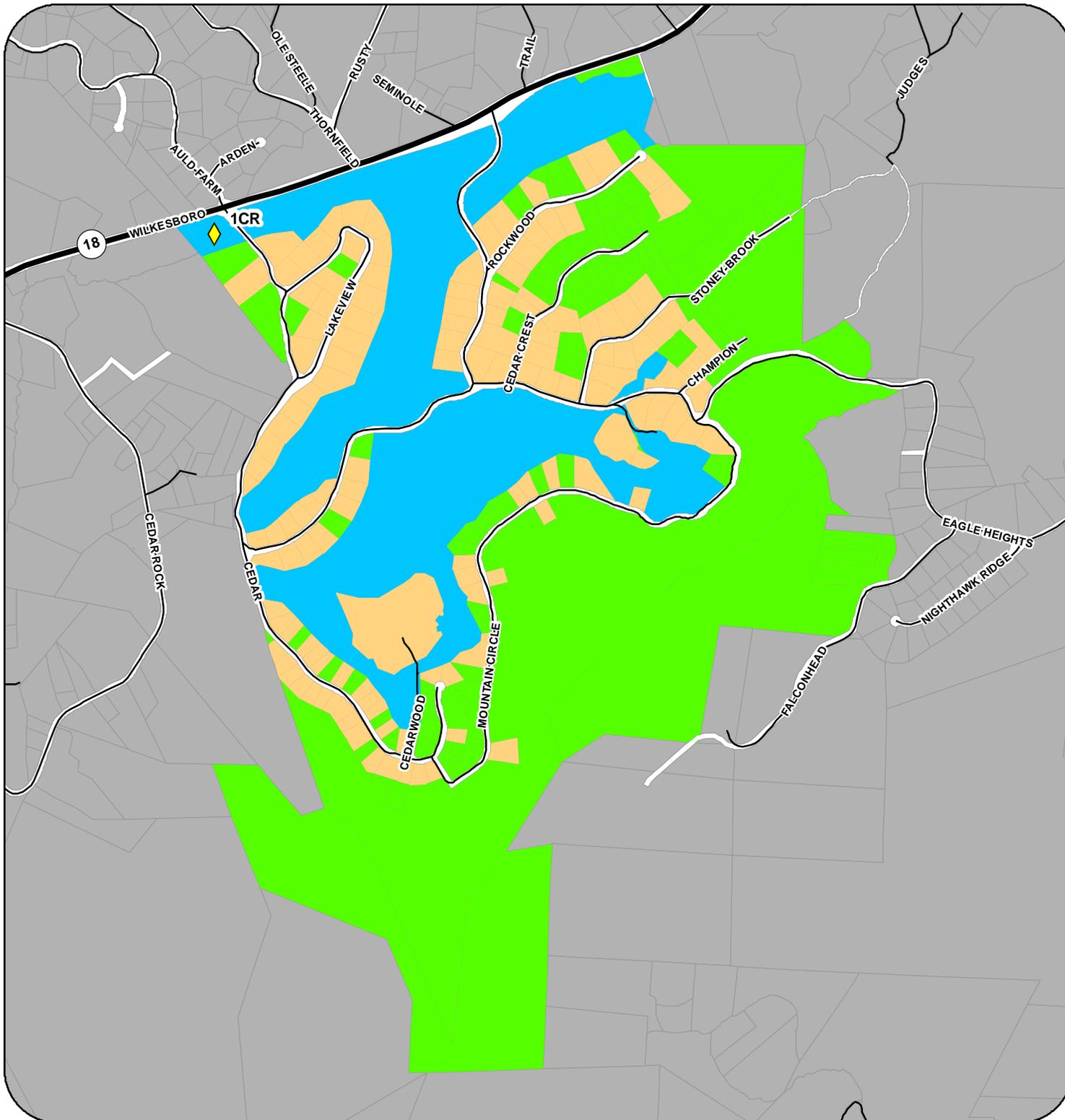
 ANHRE

Land Use

 Vacant

 Residential

 Office & Institutional



1 inch = 1,272 feet



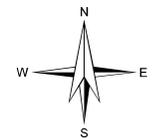
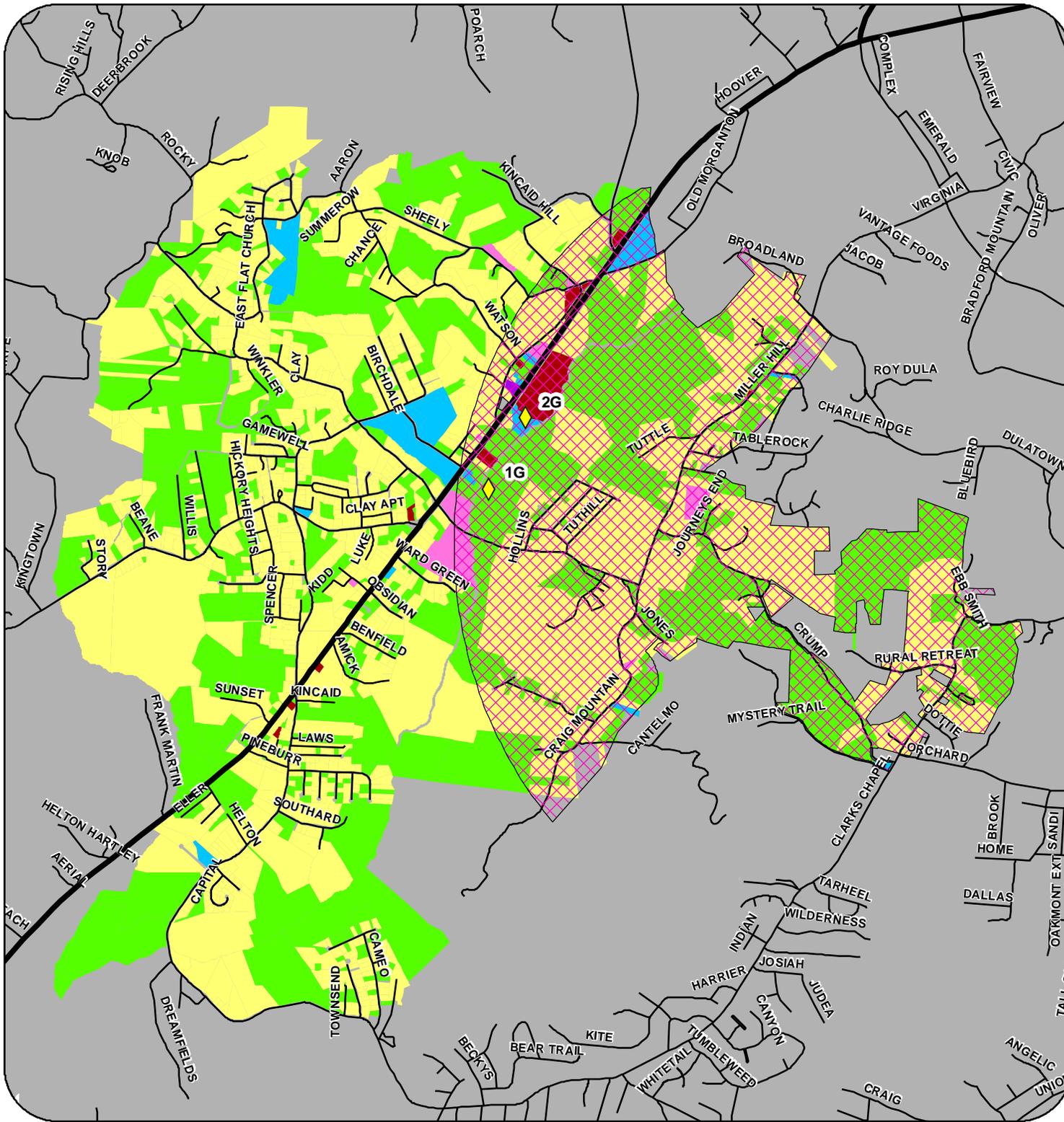
Map 3D
Caldwell County
Hazard Mitigation Plan



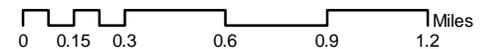
Town of Gamewell

Legend

-  Roads
 -  ANHRE
 -  Areas of Anticipated Growth
- Land Use**
-  Vacant
 -  Residential
 -  Commercial
 -  Office & Institutional
 -  Industrial
 -  Other



1 inch = 2,986 feet



Map 3E
Caldwell County
Hazard Mitigation Plan



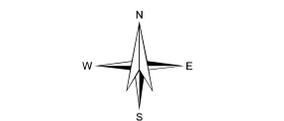
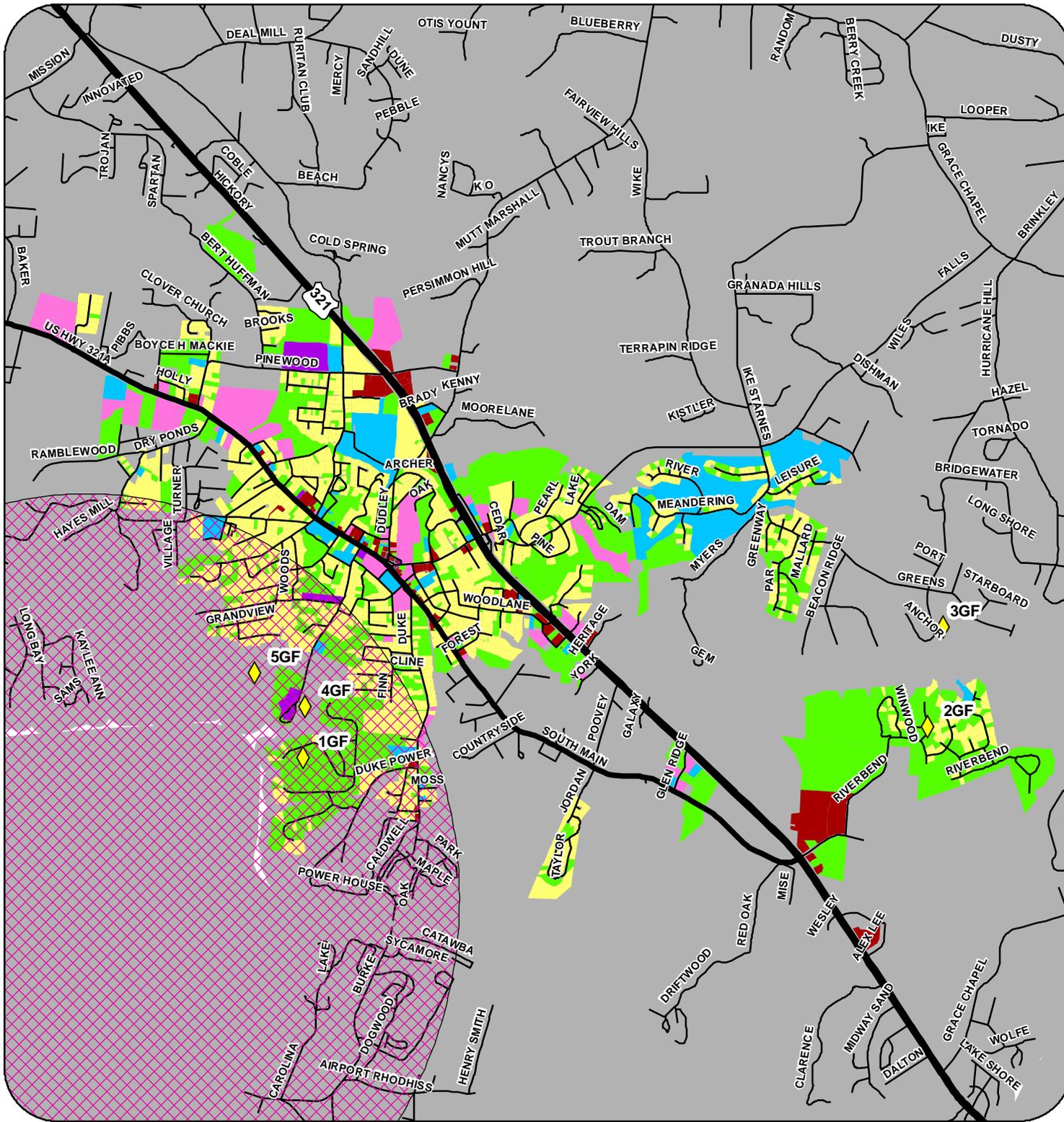
Town of Granite Falls

Legend

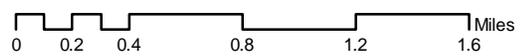
- Roads
- ANHRE
- Areas of Anticipated Growth

Land Use

- Vacant
- Residential
- Commercial
- Office & Institutional
- Industrial
- Other



1 inch = 3,554 feet



Map 3F
Caldwell County
Hazard Mitigation Plan



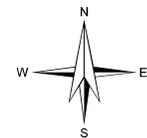
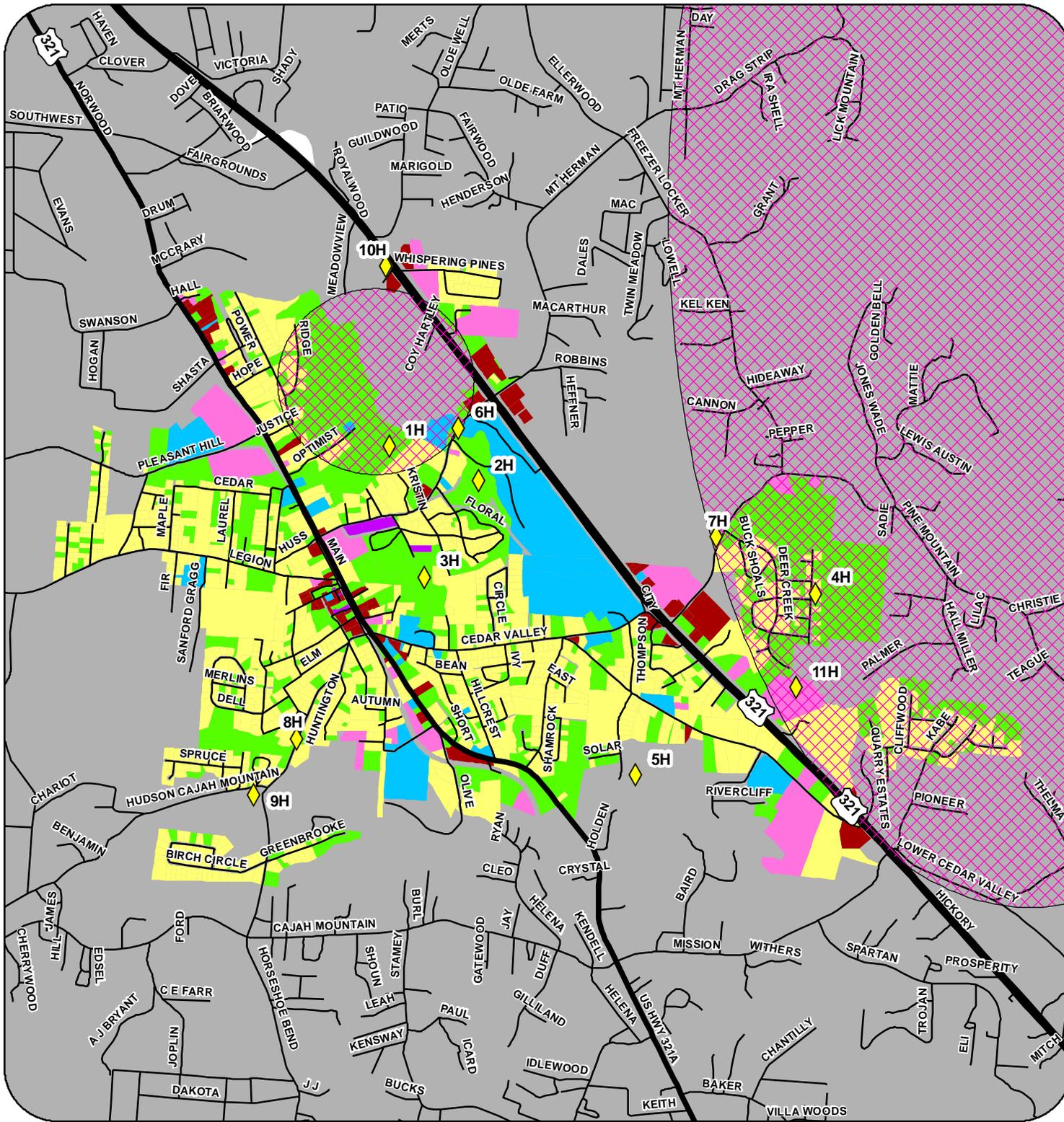
Town of Hudson

Legend

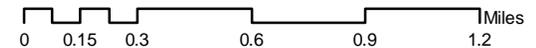
- Roads
- ANHRE
- Areas of Anticipated Growth

Land Use

- Vacant
- Residential
- Commercial
- Office & Institutional
- Industrial
- Other



1 inch = 2,654 feet



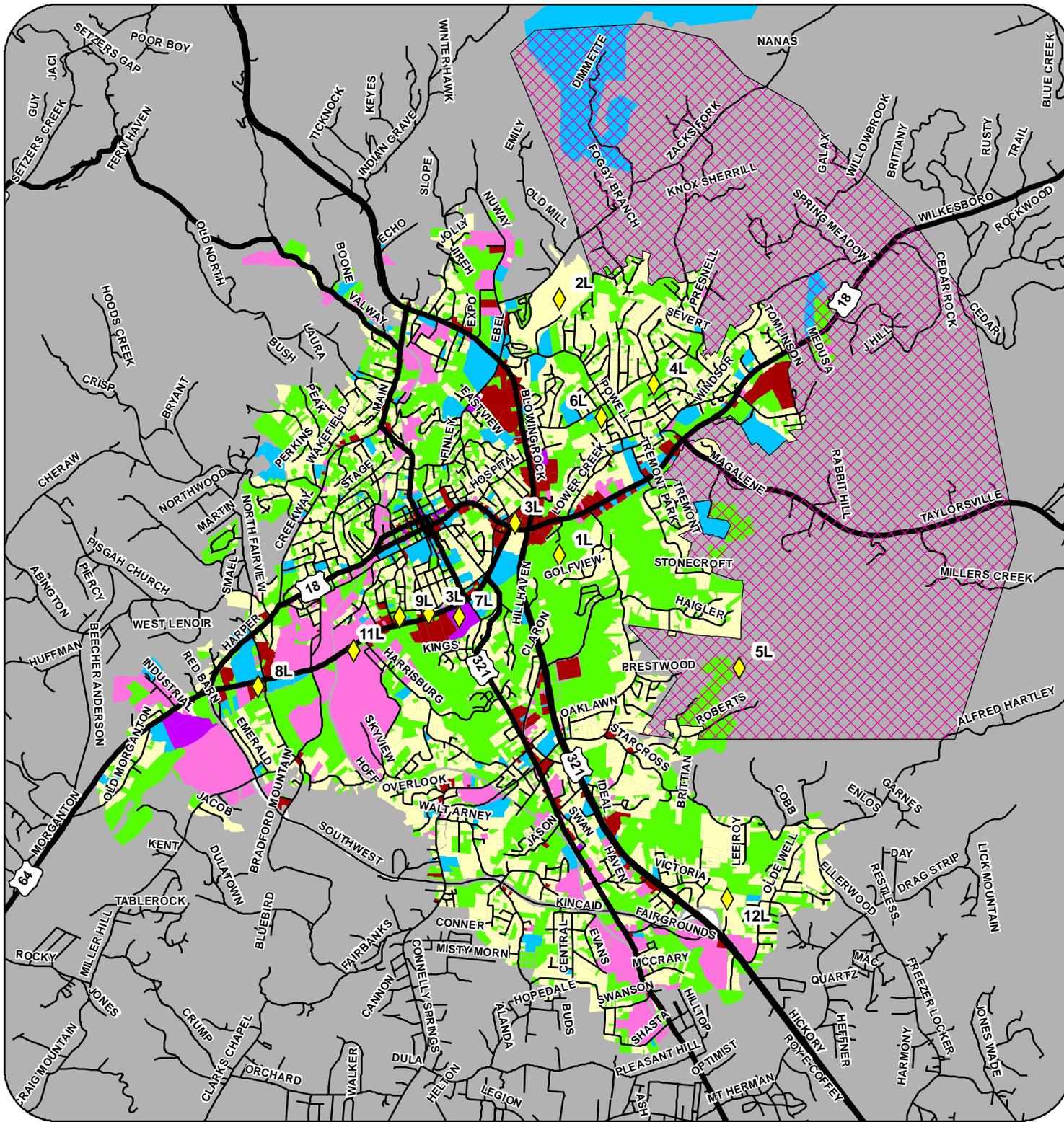
Map 36
Caldwell County
Hazard Mitigation Plan



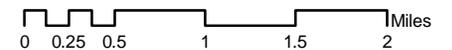
City of Lenoir

Legend

- Roads
 - ANHRE
 - Areas of Anticipated Growth
- Land Use**
- Vacant
 - Residential
 - Commercial
 - Office & Institutional
 - Industrial
 - Other



1 inch = 1.05 miles



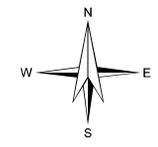
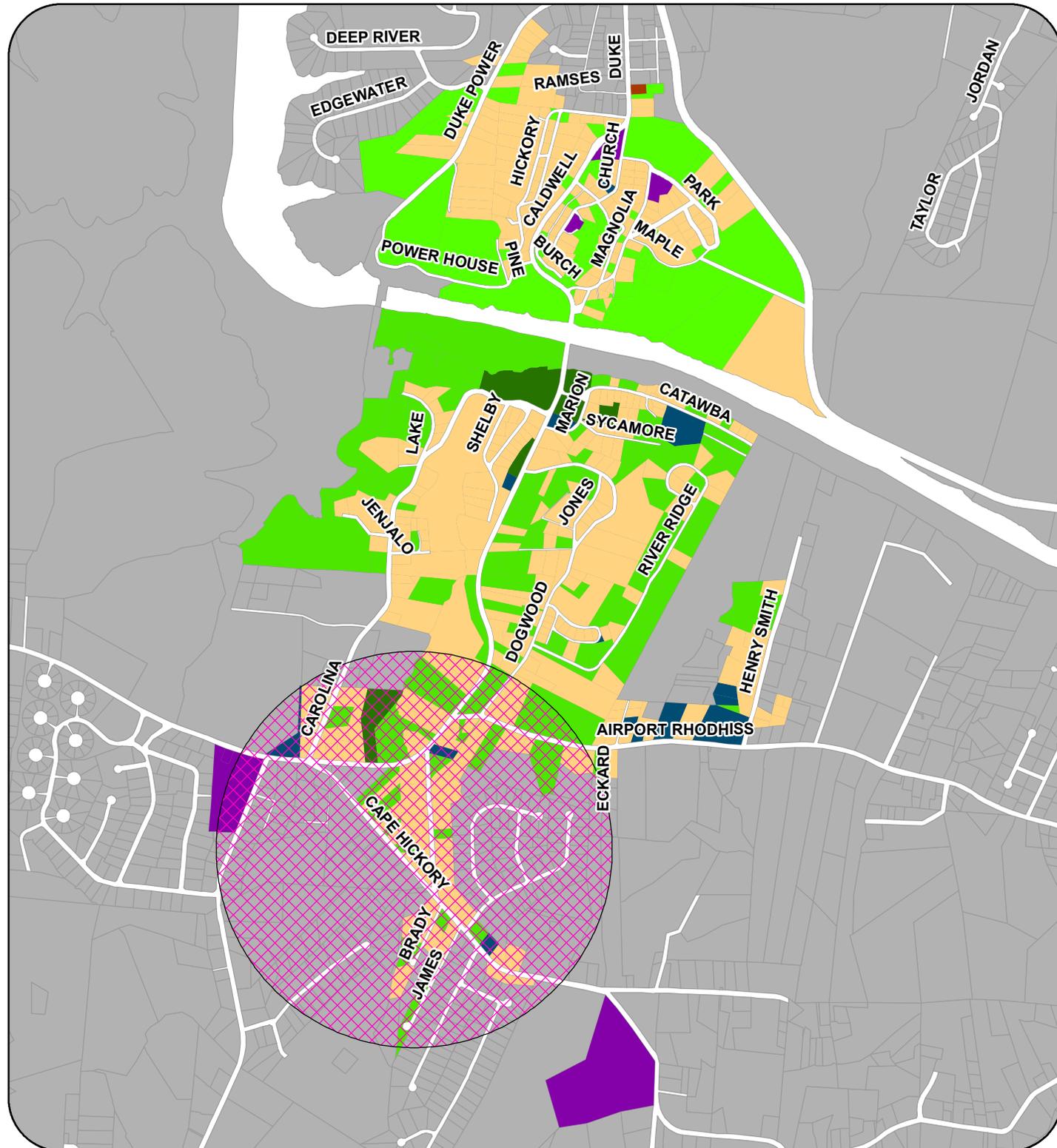
Map 311
Caldwell County
Hazard Mitigation Plan



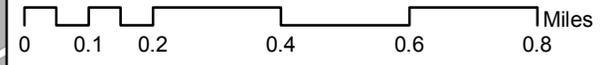
Town of Rhodhiss

Legend

-  Area of Anticipated Growth
- Land Use**
-  Vacant
-  Residential
-  Commercial
-  Office & Institutional
-  Industrial
-  Other



1 inch = 1,574 feet



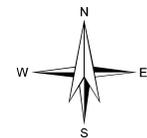
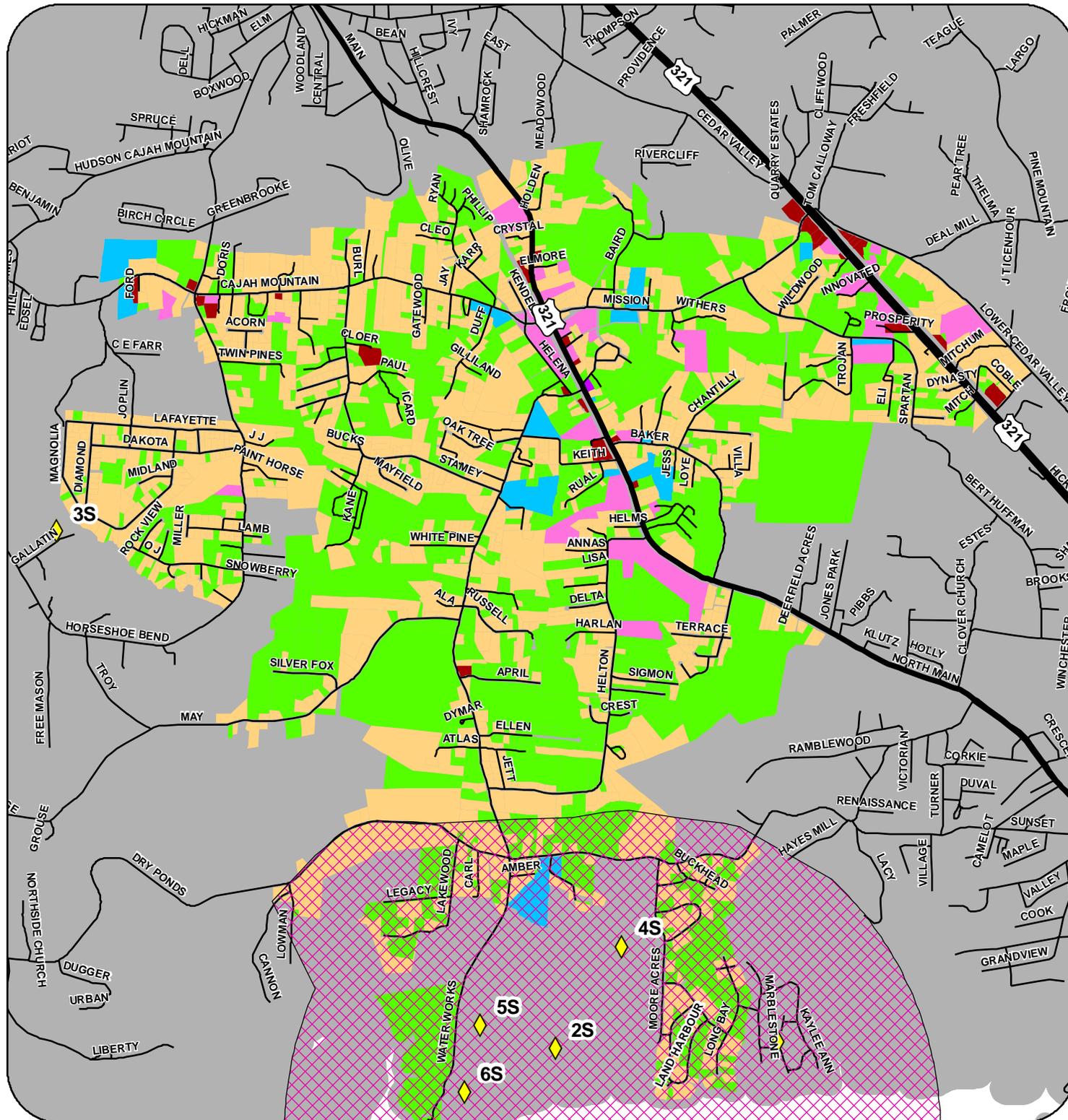
Map 31
Caldwell County
Hazard Mitigation Plan



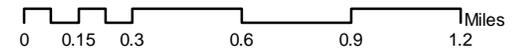
Town of Sawmills

Legend

- Roads
- ANHRE
- Areas of Anticipated Growth
- Land Use**
- Vacant
- Residential
- Commercial
- Office & Institutional
- Industrial
- Other



1 inch = 2,772 feet



Map 4



Caldwell County Hazard Mitigation Plan

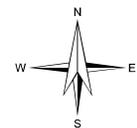
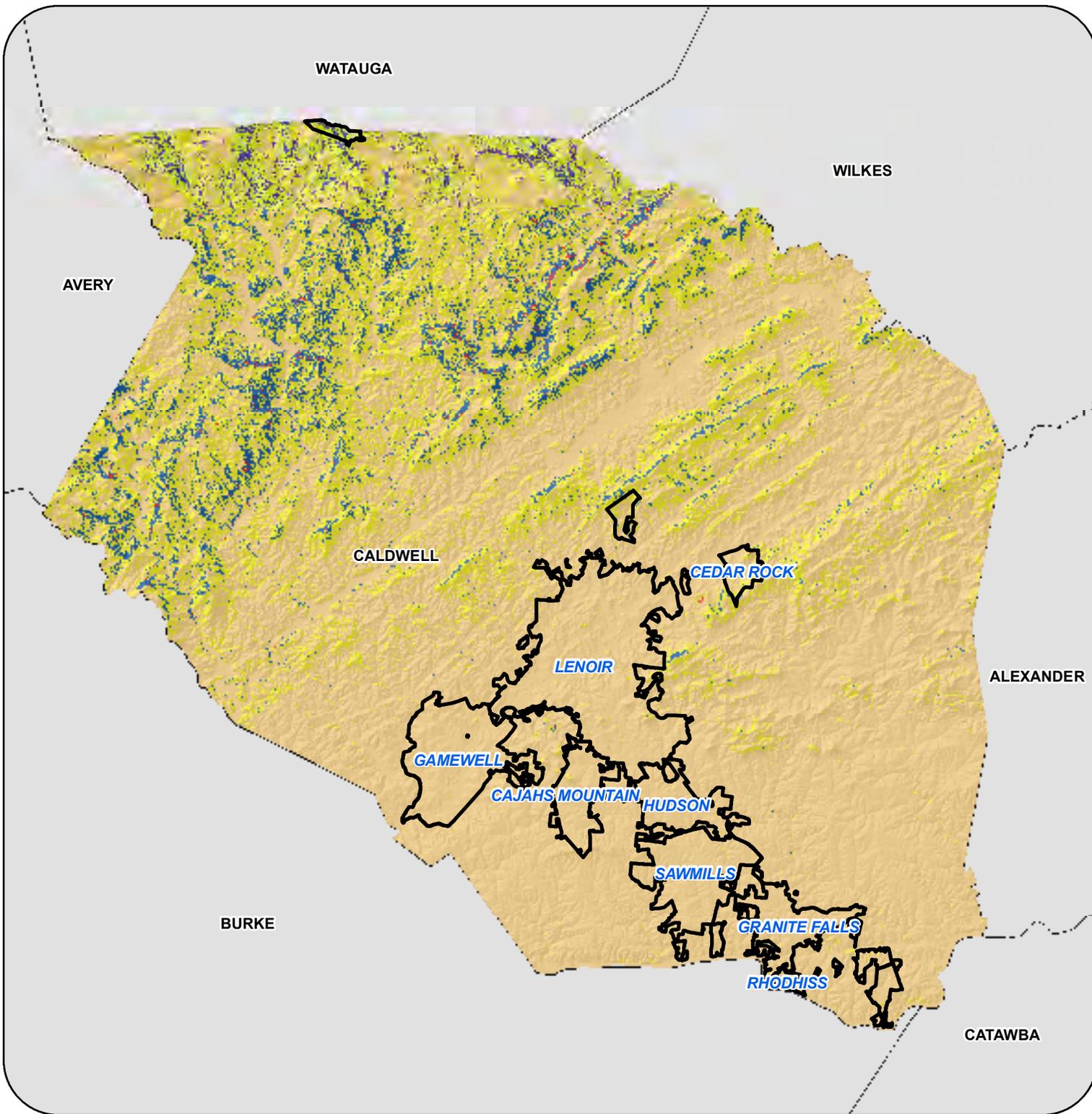
Slope

Legend

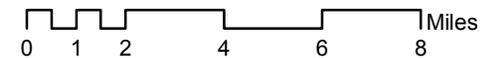
 Municipalities

Degrees of Slope

-  0° - 20°
-  20° - 30°
-  30° - 40°
-  40°+



1 inch = 4 miles



APPENDIX B
MAC Meeting Documentation

**APPENDIX B
MAC MEETING DOCUMENTATION**

Caldwell County Hazard Mitigation Plan

Public Information Meeting

Caldwell County will hold a public information meeting to address the County's Hazard Mitigation Plan update.

Please come and help Caldwell County prepare for potential disaster events through comprehensive planning.

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

Where: Caldwell County Emergency Services Building

616 West Avenue, NW, Lenoir, NC

When: October 28, 2009 at 6:00 PM

Please direct questions to:

Trevor Key at (828) 757-1325

Attendance

8/17/2009

<u>Name</u>	<u>Phone</u>	<u>e mail</u>
MARY CARTER	754-1991	townofgamewell@ ^{bell} South.net
Trevor KEY	757-1424	tkkey@ChildwellCountyNC.org
Greg Wilson	396-3131	gswilson@charter.net
Andy Day	738-3026	det@pd@charter.net

Caldwell County

Attendance

9/29/2009

Sharon Schmidt

Clint Becht

Joe Pilkerton

Connie South

Village of Cedar Rock

City of Leno

Town of Hudson/Kawana

Town of Cayah's Mtn

schmidt sharon

@ gmail.com

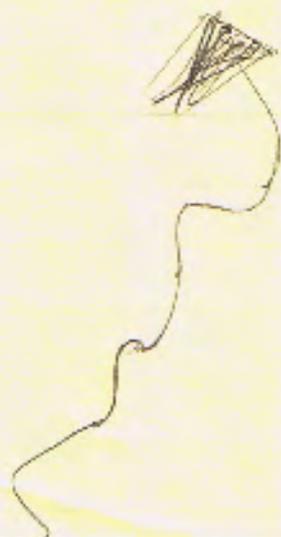
cobeahty@ci.lenoir.nc.us

joe.pilkerton@carroll.org

Caldwell County MAC

10/28/2009

<u>Name</u>	<u>Organization</u>	<u>E-mail</u>
Jon Pilkerton	WPCOG	jon.pilkerton@wpcog.org
Barbara Harmon	Town of Rhodhiss	bt.rhodhiss@yahoo.com
Laurie Lolicero	WPCOG / Town of Cajah's Mtn	laurie.bradshaw@wpcog.org
<u>Cook Beatty</u>	Lenoir	cbeatty@ci.lenoir.nc.us
Tommy Courtner	Caldwell Co.	tcourtner@caldwellcountync.org
Michael Brewer	Caldwell Co.	
Trevor Key	Caldwell Co.	tkey@caldwellcountync.org
Andy Day	Hudson	adtdhpd@charter.net



APPENDIX C
NCEM REVIEW COMMENTS

INSTRUCTIONS FOR USING THE PLAN REVIEW CROSSWALK FOR REVIEW OF LOCAL MITIGATION PLANS

Attached is a Plan Review Crosswalk based on the *Local Multi-Hazard Mitigation Planning Guidance*, published by FEMA in July, 2008. This Plan Review Crosswalk is consistent with the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act), as amended by Section 322 of the *Disaster Mitigation Act of 2000* (P.L. 106-390), the *National Flood Insurance Act of 1968*, as amended by the *National Flood Insurance Reform Act of 2004* (P.L. 108-264) and *44 Code of Federal Regulations (CFR) Part 201 – Mitigation Planning*, inclusive of all amendments through October 31, 2007.

SCORING SYSTEM

- N – Needs Improvement:** The plan does not meet the minimum for the requirement. Reviewer’s comments must be provided.
- S – Satisfactory:** The plan meets the minimum for the requirement. Reviewer’s comments are encouraged, but not required.

Each requirement includes separate elements. All elements of a requirement must be rated “Satisfactory” in order for the requirement to be fulfilled and receive a summary score of “Satisfactory.” A “Needs Improvement” score on elements shaded in gray (recommended but not required) will not preclude the plan from passing.

When reviewing single jurisdiction plans, reviewers may want to put an N/A in the boxes for multi-jurisdictional plan requirements. When reviewing multi-jurisdictional plans, however, all elements apply. States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements. Optional matrices for assisting in the review of sections on profiling hazards, assessing vulnerability, and identifying and analyzing mitigation actions are found at the end of the Plan Review Crosswalk.

The example below illustrates how to fill in the Plan Review Crosswalk.:

Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
Assessing Vulnerability: Overview				
Requirement §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. This description shall include an overall summary of each hazard and its impact on the community.				
A. Does the new or updated plan include an overall summary description of the jurisdiction’s vulnerability to each hazard?	Section II, pp. 4-10	The plan describes the types of assets that are located within geographically defined hazard areas as well as those that would be affected by winter storms.		<input type="checkbox"/>
B. Does the new or updated plan address the impact of each hazard on the jurisdiction?	Section II, pp. 10-20	The plan does not address the impact of two of the five hazards addressed in the plan. Required Revisions: <ul style="list-style-type: none"> • Include a description of the impact of floods and earthquakes on the assets. Recommended Revisions: This information can be presented in terms of dollar value or percentages of damage.		<input type="checkbox"/>
SUMMARY SCORE			<input type="checkbox"/>	<input type="checkbox"/>

LOCAL MITIGATION PLAN REVIEW SUMMARY

The plan cannot be approved if the plan has not been formally adopted. Each requirement includes separate elements. All elements of the requirement must be rated "Satisfactory" in order for the requirement to be fulfilled and receive a score of "Satisfactory." Elements of each requirement are listed on the following pages of the Plan Review Crosswalk. A "Needs Improvement" score on elements shaded in gray (recommended but not required) will not preclude the plan from passing. Reviewer's comments must be provided for requirements receiving a "Needs Improvement" score.

SCORING SYSTEM

Please check one of the following for each requirement.

N – Needs Improvement: The plan does not meet the minimum for the requirement. Reviewer's comments must be provided.

S – Satisfactory: The plan meets the minimum for the requirement. Reviewer's comments are encouraged, but not required.

Prerequisite(s) (Check Applicable Box)	NOT MET	MET
1. Adoption by the Local Governing Body: §201.6(c)(5) OR	N/A	N/A
2. Multi-Jurisdictional Plan Adoption: §201.6(c)(5) AND		X
3. Multi-Jurisdictional Planning Participation: §201.6(a)(3)		X
Planning Process	N	S
4. Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)		X
Risk Assessment	N	S
5. Identifying Hazards: §201.6(c)(2)(i)		X
6. Profiling Hazards: §201.6(c)(2)(i)		X
7. Assessing Vulnerability: Overview: §201.6(c)(2)(ii)		X
8. Assessing Vulnerability: Addressing Repetitive Loss Properties. §201.6(c)(2)(ii)		X
9. Assessing Vulnerability: Identifying Structures, Infrastructure, and Critical Facilities: §201.6(c)(2)(ii)(B)	X	
10. Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)		X
11. Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)		X
12. Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii)		X

*States that have additional requirements can add them in the appropriate sections of the *Local Multi-Hazard Mitigation Planning Guidance* or create a new section and modify this Plan Review Crosswalk to record the score for those requirements.

Mitigation Strategy

	N	S
13. Local Hazard Mitigation Goals: §201.6(c)(3)(i)		X
14. Identification and Analysis of Mitigation Actions: §201.6(c)(3)(i)		X
15. Identification and Analysis of Mitigation Actions: NFIP Compliance. §201.6(c)(3)(ii)		X
16. Implementation of Mitigation Actions: §201.6(c)(3)(iii)		X
17. Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)		X

Plan Maintenance Process

	N	S
18. Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(i)		X
19. Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)		X
20. Continued Public Involvement: §201.6(c)(4)(iii)		X

Additional State Requirements*

	N	S
Insert State Requirement		
Insert State Requirement		
Insert State Requirement		

LOCAL MITIGATION PLAN APPROVAL STATUS

PLAN NOT APPROVED

See Reviewer's Comments

PLAN APPROVED

Local Mitigation Plan Review and Approval Status

Jurisdiction: Caldwell County	Title of Plan: Caldwell County Multi-Jurisdictional Hazard Mitigation Plan	Date of Plan: 6/23/2010
Local Point of Contact: Trevor Key	Address: P.O. Box 2200 616 West Avenue, NW Lenoir, NC 28645	
Title: Caldwell County Emergency Services EMT		
Agency: Caldwell County Office of Emergency Services		
Phone Number: 828-757-1419	E-Mail: tkey@caldwellcounty.org	

State Reviewer: Stacey Fuller Linda L. Byers (QC)	Title: Hazard Mitigation Team Leader FEMA Lead Planning Specialist	Date: 6/29/2010 August 23, 2010
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FEMA Reviewer: Caleb Hopkins (DRP)	Title: Mitigation Specialist	Date: 8/18/10
Date Received in FEMA Region IV	8/6/2010	
Plan Not Approved	August 23, 2010	
Plan Approved	December 6, 2010	
Date Approved	December 6, 2010	

Jurisdiction:	DFIRM		NFIP Status*		
	In Plan	NOT in Plan	Y	N	CRS Class
1. Caldwell County (Unincorporated Areas)	Y		Y		9
2. Town of Cahah's Mountain	Y		Y		N/A
3. Village of Cedar Rock	Y		Y		N/A
4. Town of Gamewell	Y		Y		N/A
5. Town of Granite Falls	Y		Y		N/A

* Notes: Y = Participating N = Not Participating N/A = Not Mapped

Jurisdiction:	DFIRM		NFIP Status*			CRS Class
	In Plan	NOT in Plan	Y	N	N/A	
6. Town of Hudson		Y	Y			N/A
7. City of Lenoir		Y	Y			N/A
8. Town of Rhodhiss		Y	Y			N/A
9. Town of Sawmills		Y	Y			N/A
10. [ATTACH PAGE(S) WITH ADDITIONAL JURISDICTIONS]						

PREREQUISITE(S)

1. Adoption by the Local Governing Body

Requirement §201.6(c)(5): [The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			NOT MET	MET
A. Has the local governing body adopted new or updated plan?	Page 1-9 Appendix D	The plan will be adopted following approval by FEMA. For more information, see "Adoption by the Local Governing Body", in the Local Multi-Hazard Mitigation Planning Guidance, Pages 17-18.		
B. Is supporting documentation, such as a resolution, included?	N/A Page 1-9 Appendix D	Plan is a multi-jurisdictional plan. Documentation will be forwarded once approved by FEMA.	N/A	N/A
SUMMARY SCORE			N/A	N/A

2. Multi-Jurisdictional Plan Adoption

Requirement §201.6(c)(5): For multi-jurisdictional plans, each jurisdiction requesting approval of the plan **must** document that it has been formally adopted.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			NOT MET	MET
A. Does the new or updated plan indicate the specific jurisdictions represented in the plan?	Section 1, page 1-7 second paragraph and reference to MAC members/Jurisdiction table on bottom of page	The participating jurisdictions, which were represented by at least one MAC member represents each participating jurisdiction of: Caldwell County, Town of Cahaj's Mountain, Village of Cedar Rock, Town of Gamewell, Town of Granite Falls, Town of Hudson, City of Lenoir, Town of Rhodhiss, and the Town of Sawmills. It should be noted that Rhodhiss did not participate in the County's 2004 plan, but is included in the County's plan update.		
B. For each jurisdiction, has the local governing body adopted the new or updated plan?	Cover Page Pg. 1-7 Section 1, page 1-9 N/A	FEMA reviewer agrees with State Reviewer comments for this element. Following receipt of a final letter for approval from NCEM, the HMP will be forwarded to all participating jurisdiction for adoption. REQUIRED REVISION If plan is approved after FEMA review, adoption of the plan must take place within one calendar year of receiving FEMA's Approval		X
SUMMARY SCORE				X

		<p>Pending Adoption. However, if the plan is not adopted within the allowed timeframe, the participating jurisdictions must update and resubmit the plan for FEMA approval.</p> <p>For more information, please see "Multi-Jurisdictional Plan Adoption" in the <i>Local Multi-Hazard Mitigation Planning Guidance</i>, Pages 19 – 20.</p> <p>12/6/10 Caldwell County adopted the Plan update. 07/19/11 Towns of Cajah's Mountain, Gamewell, Granite Falls, Hudson, Rhodhiss, Sawmills and the Village of Cedar Rock adopted the Plan update.</p>	
<p>C. Is supporting documentation, such as a resolution, included for each participating jurisdiction?</p>	<p>Appendix D</p> <p>Appendix D</p>	<p>Documentation will be forwarded once approved by FEMA. The Updated Plan will be adopted within one calendar year of FEMA's "approval pending adoption" of the Updated Plan.</p> <p>REQUIRED REVISION Copies of fully-signed and executed resolutions or similar supporting documentation must be submitted to FEMA in order to receive final plan approval. Appendix D contains an unsigned public hearing documentation/adoption resolutions placeholder.</p> <p>For more information, please see "Multi-Jurisdictional Plan Adoption" in the <i>Local Multi-Hazard Mitigation Planning Guidance</i>, Pages 19 - 20.</p> <p>12/6/10 Caldwell County provided a copy of the Adoption Resolution. 07/19/11 Towns of Cajah's Mountain, Gamewell, Granite Falls, Hudson, Rhodhiss, Sawmills and the Village of Cedar Rock providing documentation of adopting the Plan update.</p>	<p>X</p>
<p>SUMMARY SCORE</p>			<p>X</p>

3. Multi-Jurisdictional Planning Participation

Requirement §201.6(a)(3): *Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process ... Statewide plans will not be accepted as multi-jurisdictional plans.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			NOT MET	MET
A. Does the new or updated plan describe how each jurisdiction participated in the plan's development?	Section 1, pages 1-6 to 1-10 Pg. 1-6 – 1-9	Information in this section meets the plan requirements. The plan details how jurisdictions participated in the plan update process. The updated plan describes how each jurisdiction participated in plan development. The updated plan indicates that each jurisdiction along with many other organizations participated in the plan's development by being a part of the Mitigation Advisory Committee (MAC). The Committee is charged with the responsibility of working through the planning process and assisting the consultant through compiling the information, input, and background required to develop the plan.		X
B. Does the updated plan identify all participating jurisdictions, including new, continuing, and the jurisdictions that no longer participate in the plan?	Section 1.D, page 1-7 Pg. 1-7	Information in this section meets the plan requirements. The plan clearly identifies that the only change is the inclusion of the Town of Rhodhiss into the plan. The updated plan identifies all participating jurisdictions which include: <ul style="list-style-type: none"> • Cajah's Mountain • Cedar Rock • Gamewell • Granite Falls • Hudson • Lenoir • Rhodhiss • Sawmills The Town of Rhodhiss is a new participant under the Caldwell County HMP Update.		X
SUMMARY SCORE				X

PLANNING PROCESS: §201.6(b): *An open public involvement process is essential to the development of an effective plan.*

4. Documentation of the Planning Process

Requirement §201.6(b): *In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:*

- (1) *An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;*
- (2) *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 private and non-profit interests to be involved in the planning process; and*
- (3) *Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.*

Requirement §201.6(c)(1): *[The plan shall document] 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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the plan provide a narrative description of the process followed to prepare the new or updated plan?	Section 1, pages 1-6 to 1-10 Pg. 1-6 – 1-9	Information in this section meets the plan requirements. The plan describes the process of the process used to develop the plan update. The updated plan discusses the documentation of the planning process. The introduction section describes who was involved in the planning process, collecting data and hazard information, and the overall process to review the draft documents prior to submitting to the final to FEMA for approval.		X
B. Does the new or updated plan indicate who was involved in the current planning process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?)	Section 1, page 1-7 and 1-9 Pg. 1-6 – 1-9	Information in this section meets the plan requirements. The plan details the MAC committee members from each participating jurisdiction, as well as the consultant who were involved in the update process. NCDOT and ARC were also invited to review and comment. The updated plan discusses who was involved in the planning process. Holland Consulting Planners, Inc. of Wilmington NC assisted in the development of the plan and members of the Mitigation Advisory Committee (MAC), which included members from each participating jurisdiction who were responsible for overseeing the plan update process.		X

4. Documentation of the Planning Process

Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) 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 private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Requirement §201.6(c)(1): [The plan shall document] 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.

Location in the		SCORE
<p>C. Does the new or updated plan indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage and prior to the plan approval?)</p>	<p>Section 1, pages 1-8 to 1-9; Appendix B</p> <p>Pg. 1-6 – 1-9</p>	<p>Information in this section meets the plan requirements. The plan details that on October 28, 2009 a public input session was held, and that the meeting was advertised in the local newspaper. The Caldwell County website also has a draft version of the plan online. Prior to adoption the public will have an opportunity to comment on the plan through a final public meeting. The plan states that no public comments were received.</p> <p>REQUIRED REVISION While the public has had the opportunity to comment on the plan previously, the updated Plan must indicate how the public was provided an opportunity to comment on the plan prior to final plan approval.</p> <p>For more information, please see "Documentation of the Planning Process" in the <i>Local Multi-Hazard Mitigation Planning Guidance</i>, Pages 26-27.</p> <p>Meeting held at the time of Adoption Resolution</p> <p style="text-align: center;">X</p>
<p>D. Does the new or updated plan discuss the opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?</p>	<p>Section 1, pages 1-8 to 1-9</p> <p>Pg. 1-9</p>	<p>Information in this section meets the plan requirements. The plan details that all communities and adjoining counties, along with NCDOT and ARC were given an opportunity to comment on the plan update. The plan states that no comments were received from these agencies.</p> <p>The updated plan details the opportunity that was given to other interested parties in order to be involved with the planning process. These parties included the North Carolina DOT, Red Cross, and all adjoining counties.</p> <p style="text-align: center;">X</p>

<p>E. Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?</p>	<p>Section 1, page 1-6 Section D</p>	<p>Information in this section meets the plan requirements. Section D details that the County's Comprehensive Plan, Zoning Ordinance, and Flood Prevention Ordinance were used in the plan update.</p>		<p>X</p>
<p>F. Does the updated plan document how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process?</p>	<p>Section 1, pages 1-3 to 1-6 Pg. 1-4 -1-6</p>	<p>The updated plan described the review and incorporation if appropriate of existing plans, studies, reports, and technical information. Information gathered from the County's comprehensive plan, zoning ordinances, and the flood damage prevention ordinance were important additions to the plan.</p> <p>Information in this section meets the plan requirements. The plan used a strategic planning module on page 1-3 and provides a narrative of criteria used to evaluate each section of the "previous plan" to provide linkage to the current update.</p> <p>The plan formatting portion of Section 1: Introduction, displays documentation on how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process.</p>		<p>X</p>
<p>SUMMARY SCORE</p>				<p>X</p>

RISK ASSESSMENT: §201.6(c)(2): *The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.*

5. Identifying Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan include a description of the types of all natural hazards that affect the jurisdiction?	Section 3, pages 3-1 to 3-18 Pg. 3-1 - 3-21	Information in this section meets the plan requirements. The plan update lists and provides a description of nine hazards faced by the jurisdiction in section 3 Identification of potential natural hazards. All of these sections were updated with recent statistical data. Explanation of Hazards not identified are in section 3 L. The following hazards that affect the participating jurisdiction are profiled in the updated plan: <ul style="list-style-type: none"> • Wildfire • Landslides • Flooding • Severe Winter Storms • Severe Thunderstorms and Windstorms • Lightning • Tornados • Dam/Levee Failure • Drought 		X
SUMMARY SCORE				X

6. Profiling Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment shall include a] description of the ... 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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the risk assessment identify the location (i.e., geographic area affected) of each natural hazard addressed in the new or updated plan?	Section 5, pages 5-4 through 5-8 (This section contains all data supporting the maps. All maps are provided in Appendix A). Pg. 3-1 - 3-21 Appendix A Appendix G	Information in this section meets the plan requirements. The plan provides hazard information by location. Attached Maps, narrative, and data establishes geographic planning areas. The updated plan identifies the location of each natural hazard in the form of a narrative description. Maps are present in Appendix A for the flood hazard as well. Appendix G gives specific locations of areas within each participating jurisdiction that are susceptible to a particular hazard.		X
B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the new or updated plan?	Section 3, pages 3-19 to 3-20 Pg. 3-20	Information in this section meets the plan requirements. The plan details hazard by extent through ranking of each hazard in Section 3 M and the Likelihood of Occurrence Summary on Section 3 N.		X
C. Does the plan provide information on previous occurrences of each hazard addressed in the new or updated plan?	Section 3, pages 3-1 to 3-18 Pg. 3-1 - 3-21	Table 13 in Section 3 identifies the extent of each hazard addressed in the updated plan via an intensity scale. The updated plan clearly defined the classification method to illustrate what a community could anticipate from a hazard. Information in this section meets the plan requirements. The plan details previous occurrences in the narrative of each hazard discussed as well as the frequency of occurrence of each hazard. FEMA reviewer agrees with State Reviewer comments for this element.		X
D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the new or updated plan?	Section 3, page 3-20; Table 13 Pg. 3-20	Information in this section meets the plan requirements. Future events are detailed in the plan through the Caldwell County Hazard Impact Table referenced. The updated plan includes the probability of future events for each hazard addressed. Table 13 in Section 3 puts the likelihood of occurrence into the following categories: <ul style="list-style-type: none"> Highly Likely: Near 100% probability in the next year 		X

		<ul style="list-style-type: none"> Likely: Between 10 and 100% probability in the next year; or at least one chance in the next 10 years Possible: Between 1 and 10% probability in the next year; or at least one chance in the next 100 years Unlikely: Less than 1% probability in the next year; or less than one chance in the next 100 years 		
SUMMARY SCORE				X

7. Assessing Vulnerability: Overview

Requirement §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. This description shall include an overall summary of each hazard and its impact on the community.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan include an overall summary description of the jurisdiction's vulnerability to each hazard?	Section 5, pages 5-1 to 5-9; Appendix G Pg. 5-1 – 5-9	Information in this section meets the plan requirements. The Vulnerability Analysis section analyzes developed areas, undeveloped areas, and anticipated growth areas, critical facilities, hazardous locations, rep loss, geographic planning areas and special pop to each hazard. FEMA reviewer agrees with State Reviewer comments for this element. The updated plan does a nice job of providing a robust vulnerability assessment for participating jurisdictions.		X
B. Does the new or updated plan address the impact of each hazard on the jurisdiction?	Section 5, pages 5-1 to 5-9; Appendix A Maps Pg. 3-20 – 3-21	Information in this section meets the plan requirements. Most hazards affect the county area-wide, however the Hazardous Locations Section discusses the impacts of individual hazards of flooding, wildfire, dam failure, and landslides that are uniquely exposed in certain areas of the County. All Hazards exposure and ANHRE are also discussed on page 5-8 Table 13 in Section 3 contains an assessment that describes the potential impact that an identified hazard could have on the participating jurisdictions. The following levels categorize the impact assessment: <ul style="list-style-type: none"> Catastrophic Critical Limited Negligible An associated description of the level of impact is present as well in the table		X

SUMMARY SCORE		X
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8. Assessing Vulnerability: Addressing Repetitive Loss Properties

Requirement §201.6(c)(2)(ii): [The risk assessment] must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged floods.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
<p>A. Does the new or updated plan describe vulnerability in terms of the types and numbers of repetitive loss properties located in the identified hazard areas?</p>	<p>Section 5, page 5-9</p> <p>Pg. 5-9</p>	<p>Note: This requirement becomes effective for all local plans approved after October 1, 2008. Information in this section meets the plan requirements. Unincorporated Caldwell County has no repetitive loss properties. The only participating jurisdiction that has rep loss properties is the City of Lenoir, which has three non-residential structures which are being monitored.</p> <p>FEMA reviewer agrees with State Reviewer comments for this element.</p>	X	X
SUMMARY SCORE			X	X

9. Assessing Vulnerability: Identifying Structures

Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
<p>A. Does the new or updated plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?</p>	<p>Section 5, pages 5-1 to 5-9, and Appendix A, Maps 3A to 3I (Critical facilities are listed in Appendix F).</p> <p>Pg. 5-1 – 5-9 Appendix A</p>	<p>Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing. Information in this section meets the plan requirements. The MAC provided input and the plan was updated to provide current data for these sections/Maps.</p> <p>Table 32 and 33 describes vulnerability in terms of types and numbers of buildings. Critical facility maps are included for each participating jurisdiction as well.</p>	X	X
<p>B. Does the new or updated plan describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas?</p>	<p>Section 5: pages 5-1 to 5-9 and Appendix A, Maps 3A to 3I</p>	<p>Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing. Information in this section meets the plan requirements. The MAC provided input and the plan was updated to provide</p>		

	<p>(Critical facilities are listed within Appendix F)</p> <p>Pg. 5-1 – 5-9 Appendix A</p>	<p>current data for these sections/Maps.</p> <p>RECOMMENDED REVISION The updated plan does a nice of discussing growth and development trends via maps and sources of data. However, in order to fulfill the requirement the updated plan <i>should</i> include estimates of the number and type of future buildings, infrastructure, and critical facilities that are anticipated to be located in identified hazard areas based on projected community growth and development.</p> <p>For more information, please see “Addressing Vulnerability: Identifying Structures” in the Local Multi-Hazard Mitigation Planning Guidance, Pages 42 – 44.</p>	<p>X</p>
<p>SUMMARY SCORE</p>			<p>X</p>

10. Assessing Vulnerability: Estimating Potential Losses

Requirement §201.6(c)(2)(ii)(B): [The plan *should* describe vulnerability in terms of an] estimate of the potential dollar 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

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
<p>A. Does the new or updated plan estimate potential dollar losses to vulnerable structures?</p>	<p>Section 5 Table 34 and Table 36.</p>	<p>Note: A “Needs Improvement” score on this requirement will not preclude the plan from passing. The plan update states vulnerability in general terms of dollar amount for existing development in the floodplain and in steep slope areas</p> <p>The updated plan satisfies the element by providing potential dollar loss estimates in Table 34, which contain structure values of developed land in flood zones.</p>		<p>X</p>
<p>B. Does the new or updated plan describe the methodology used to prepare the estimate?</p>	<p>Pg. 5-5</p>	<p>Note: A “Needs Improvement” score on this requirement will not preclude the plan from passing. The value of the structure was used in developed areas of the floodplain and in the steep slope table.</p> <p>The updated plan describes the methodology used to prepare the estimate. Estimates were obtained for the Caldwell county GIS and Holland Consulting Planners.</p>		<p>X</p>

11. Assessing Vulnerability: Analyzing Development Trends

Requirement §201.6(c)(2)(ii)(C): [The plan **should** describe vulnerability in terms of] 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.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE		SUMMARY SCORE
			N	S	
A. Does the new or updated plan describe land uses and development trends?	Pg. 5-1 – 5-9 Appendix A	<p>Note: A "Needs Improvement" score on this requirement will not preclude the plan from passing.</p> <p>Land use trends within areas particularly susceptible to defined hazards have been outlined within Appendix G of the plan update. This section was reviewed by the MAC to ensure that all defined conditions are still applicable.</p> <p>Maps appear in Appendix A that describe land uses and development trends from a spatial stand point. Throughout Section 5, various descriptions of land uses and development trends are present in the section.</p>		X	
SUMMARY SCORE					X

12. Multi-Jurisdictional Risk Assessment

Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment **must** assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE		SUMMARY SCORE
			N	S	
A. Does the new or updated plan include a risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?	Section 5, pages 5-1 to 5-9, and Tables 34, 35, and 36, Appendix A Maps listed by Jurisdiction Pg. 3-1 - 3-21	<p>Information in this section meets the plan requirements. Section C.1 of Section 5 also discusses unique hazards by jurisdictional areas.</p> <p>The plan includes risk assessments for hazards that tend to be more isolated that may affect one or multiple jurisdictions rather than potentially the entire planning area (i.e. winter storm).</p>		X	
SUMMARY SCORE					X

MITIGATION STRATEGY: §201.6(c)(3): *The plan shall include a mitigation strategy that provides the jurisdiction’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*

13. Local Hazard Mitigation Goals

Requirement §201.6(c)(3)(i): *[The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.*

Element	Location in the Plan (section or annex and page #)	Reviewer’s Comments	SCORE	
			N	S
A Does the new or updated plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards?	Section 6.C & D pages 6-8 to 6-10 Pg. 6-8 – 6-9	Information in this section meets the plan requirements. The updated plan outlines the following goal categories in order to reduce or avoid long-term vulnerabilities: <ul style="list-style-type: none"> • General: Goals that address the community’s level of vulnerability and hazard threat in general. • Future Development: Goals that consider future development in areas exposed to an elevated risk of natural hazard damage. • Existing Development: Goals that address existing infrastructure and buildings in areas exposed to an elevated risk of natural hazard damage. • Redevelopment: Goals that address redevelopment in case of a natural disaster. • Public Education and Outreach: Goals that are focused on educating the public on natural hazard risks. • Natural Resource Protection: Goals that are focused on natural resource protection and a means of hazard mitigation. 		X
SUMMARY SCORE				X

14. Identification and Analysis of Mitigation Actions

Requirement §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 effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Do the new or updated plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?	Section 6, pages 6-14 to 6-41 Pg. 6-15 – 6-41	Information in this section meets the plan requirements. The cited sections provide a comprehensive range of actions tied to specific hazards. FEMA reviewer agrees with State Reviewer comments for this element.		X
B. Do the identified actions and projects address reducing the effects of hazards on new buildings and infrastructure?	Section 6, pages 6-14 to 6-41 Pg. 6-15 – 6-41	Information in this section meets the plan requirements. The cited sections provide a comprehensive range of actions aimed at reducing effects on new buildings The updated plan contains action items that identify specific activities focused on new buildings and infrastructure. An example of such an action includes Strategy #5: The Caldwell County Planning and Building Inspections Departments will make information regarding hazards and development regulations within floodplains available.		X
C. Do the identified actions and projects address reducing the effects of hazards on existing buildings and infrastructure?	Section 6, pages 6-14 to 6-41 Pg. 6-15 – 6-41	Information in this section meets the plan requirements. The cited sections provide a comprehensive range of actions aimed at reducing effects on existing buildings. The updated plan contains action items that identify specific activities focused on existing buildings and infrastructure. An example of such an action includes Strategy #3: Caldwell County will annually mail a notice to all property owners whose land is located within a special flood hazard area.		X
SUMMARY SCORE				X

15. Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance

Requirement: §201.6(c)(3)(ii): [The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan describe the jurisdiction (s) participation in the NFIP?	Section 4, pages 4-17 to 4-18 Pg. 4-18	<p>Note: This requirement becomes effective for all local mitigation plans approved after October 1, 2008.</p> <p>Information in this section meets the plan requirements. The Flood damage and Prevention Ordinance Section discusses details of participating in the NFIP. Paragraph 2 of page 4-18 states the jurisdictions that participate, which are all jurisdictions covered in this plan update.</p> <p>The updated plan indicates that the following communities within Caldwell County participate in the NFIP:</p> <ul style="list-style-type: none"> • Caldwell County • Cajah's Mountain • Cedar Rock • Gamewell • Granite Falls • Hudson • Lenoir • Rhodhiss • Sawmills 		X
B. Does the mitigation strategy identify, analyze and prioritize actions related to continued compliance with the NFIP?	Section 6, pages 6-11 to 6-12 Strategies listed on pages 6-15 to 6-41 Pg. 6-15 – 6-41	<p>Note: This requirement becomes effective for all local mitigation plans approved after October 1, 2008.</p> <p>Information in this section meets the plan requirements. Each strategy considered how it would further the County's standing in the NFIP through listing the CRS activity, estimated points and required documentation.</p> <p>The updated plan includes several action items that seek to strategize, identify, analyze and prioritize actions related to continued compliance with the NFIP. An example of such is Strategy #11 performing actions to maintain participation in the Community Rating System.</p>		X
SUMMARY SCORE				X

16. Implementation of Mitigation Actions

Requirement: §201.6(c)(3)(iii): [The mitigation strategy section **shall** include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated mitigation strategy include how the actions are prioritized ? (For example, is there a discussion of the process and criteria used?)	Section 6, page 6-11 to 6-15 Pg. 6-14 – 6-15	Information in this section meets the plan requirements. The plan discusses a prioritized list of strategies; and criteria of how the strategies were prioritized on page 6-14. The updated plan prioritized actions according to the following factors: <ul style="list-style-type: none"> • Institutional capability • Financial feasibility of implementation • Action to support effective mitigation planning 		X
B. Does the new or updated mitigation strategy address how the actions will be implemented and administered, including the responsible department, existing and potential resources and the timeframe to complete each action?	Section 6, pages 6-14 to 6-41 Pg. 6-15 – 6-41	Information in this section meets the plan requirements. The plan explains clearly how the strategies are to be implemented by and by whom The updated plan addresses how the actions will be implemented and administered including the responsible department, possible funding sources, and the implementation schedule.		X
C. Does the new or updated prioritization process include an emphasis on the use of a cost-benefit review to maximize benefits?	Section 6, pages 6-11 to 6-13 Pg. 6-12	Information in this section meets the plan requirements. The MAC reviewed each proposed strategy with respect to the overall short and long-term cost in relation to the benefits to its citizens. The updated plan indicated that cost benefit review of each project was a key focus. The planning committee reviewed each proposed strategy with respect to the overall short and long term cost in relation to the benefits that will be ultimately afforded to the citizens of Caldwell County.		X
D. Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (i.e., deferred), does the updated plan describe why no changes occurred?	Section 6, pages 6-2 to 6-8 Pg. 6-2 to 6-8	Information in this section meets the plan requirements. Strategies were updated as completed, ongoing, not completed from the 2004 plan. If the task was not completed it will remain to be considered for implementation over the next five years. FEMA reviewer agrees with State Reviewer comments for this element.		X

SUMMARY SCORE			X
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17. Multi-Jurisdictional Mitigation Actions

Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there **must** be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan include identifiable action items for each jurisdiction requesting FEMA approval of the plan?	Section 6, pages 6-14 to 6-41	Information in this section meets the plan requirements. The plan provides at least one action for each jurisdiction in the plan.		
B. Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (i.e., deferred), does the updated plan describe why no changes occurred?	Pg. 6-15 – 6-41	FEMA reviewer agrees with State Reviewer comments for this element.		X
	Section 6. pages 6-2 to 6-8	Information in this section meets the plan requirements. The plan clearly explains deleted, deferred, and completed actions. If the task was not completed it will remain to be considered for implementation over the next five years.		X
	Pg. 6-2 to 6-8	FEMA reviewer agrees with State Reviewer comments for this element.		X
SUMMARY SCORE				X

PLAN MAINTENANCE PROCESS

18. Monitoring, Evaluating, and Updating the Plan

Requirement §201.6(c)(4)(i): [The plan maintenance process **shall** include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan describe the method and schedule for monitoring the plan, including the responsible department?	Section 7, pages 7-2 to 7-4	Information in this section meets the plan requirements. The plan clearly details the schedule for plan monitoring which will take place through a formal review by the MAC twice annually, unless a disaster or other circumstances warrant a change. Roles of the MAC and the lead official of the MAC, Caldwell County Emergency Services are discussed.		

	Pg. 7-2 – 7-4	<p>The plan update contains a section explaining that in order to track progress and update the mitigation strategies identified in the policy section of the plan, the County will revisit this plan on a bi-annual basis and after a hazard event. The Emergency Services director will be responsible for these actions.</p>	X
<p>B. Does the new or updated plan describe the method and schedule for evaluating the plan, including how, when and by whom (<i>i.e.</i> the responsible department)?</p>	Section 7, pages 7-2 to 7-4	<p>Information in this section meets the plan requirements. The plan clearly details the method for future evaluation of the plan which will take place through a formal review by the MAC twice annually, unless a disaster or other circumstances warrant a change. Evaluating progress will be achieved by monitoring changes in vulnerabilities as listed on pg 7-3.</p>	X
<p>C. Does the new or updated plan describe the method and schedule for updating the plan within the five-year cycle?</p>	Section 7, pages 7-2 to 7-4	<p>FEMA reviewer agrees with State Reviewer comments for this element.</p> <p>Information in this section meets the plan requirements. The plan clearly describes how the plan will be updated. The plan review methodology is discussed further in this section. The Mac will make changes and the County Board of Commissioners or the governing body for the participating jurisdiction will approve these changes. An opportunity for public involvement for comment and maintenance will be held once annually.</p>	X
	Pg. 7-2 – 7-4	<p>The plan update contained a section that described the process of updating the plan within the five year cycle. Updating of the plan will be by written changes and submissions, as the MAC deems appropriate and necessary, and as approved by the Caldwell County Board of Commissioners or the participating jurisdictions' governing board, if applicable.</p>	X
SUMMARY SCORE			X

19. Incorporation into Existing Planning Mechanisms

Requirement §201.6(c)(4)(ii): *[The plan 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.*

Element	Location in the Plan (section or annex and page #)	Reviewer's Comments	SCORE	
			N	S
A. Does the new or updated plan identify other local planning mechanisms available for incorporating the mitigation requirements of the mitigation plan?	Section 4, page 4-17 - 4-22 Pg. 4-17 - 4-22	Information in this section meets the plan requirements. This section identifies existing policies and programs, such as the flood damage and prevention ordinance, NC state Building Code, Minimum Housing Codes, Watershed Protection Ordinance, Ridge Law, Zoning Ordinances, Subdivision Ordinances, Mobile Home Park Ordinance, and Capital Improvement Plans that were used to incorporate the mitigation requirements of this plan. FEMA reviewer agrees with State Reviewer comments for this element. The plan update does a nice job of identifying the various planning mechanisms that are available to incorporating the mitigation requirements of the mitigation plan.		X
B. Does the new or updated plan include a process by which the local government will incorporate the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	Section 7, pages 7-1 to 7-4 Pg. 7-1 – 7-3	Information in this section meets the plan requirements. The plan explains generally how the update process will be included by local government by utilizing this plan as a starting point toward implementing policies and programs to reduce loss to life and property from natural hazards. The updated plan does a nice job of describing the process by which the local government will incorporate the mitigation strategy and other information contained in the plan into other planning mechanisms.		X
C. Does the updated plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	Section 7, pages 7-1 to 7-4, page 4-47 Pg. 7-1 – 7-3	Information in this section meets the plan requirements. The plan explains generally, how the plan recommendations and other underlying principles can be incorporated into other county and municipal plans and regulatory mechanisms, such as local Capital Improvement Plans and Land Use Plans, when appropriate. FEMA reviewer agrees with State Reviewer comments for this element.		X

MATRIX A: PROFILING HAZARDS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that their plan addresses each natural hazard that can affect the jurisdiction. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.



Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)		A. Location		B. Extent		C. Previous Occurrences		D. Probability of Future Events	
	Yes		N	S	N	S	N	S	N	S
Avalanche	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Coastal Erosion	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Coastal Storm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Dam Failure	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Drought	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Earthquake	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Expansive Soils	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Levee Failure	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Flood	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Hailstorm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Hurricane	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Land Subsidence	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Landslide	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Severe Winter Storm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Tornado	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Tsunami	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Volcano	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Wildfire	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Windstorm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Other _____	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Other _____	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						
Other _____	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						

Legend:

- §201.6(c)(2)(i) Profiling Hazards
- A. Does the risk assessment identify the location (i.e., geographic area affected) of each hazard addressed in the **new or updated** plan?
- B. Does the risk assessment identify the extent (i.e., magnitude or severity) of each hazard addressed in the **new or updated** plan?
- C. Does the plan provide information on previous occurrences of each natural hazard addressed in the **new or updated** plan?
- D. Does the plan include the probability of future events (i.e., chance of occurrence) for each hazard addressed in the plan?

MATRIX B: ASSESSING VULNERABILITY

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure that the new or updated plan addresses each requirement. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An "N" for any element of any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk. Note: Receiving an N in the shaded columns will not preclude the plan from passing.



Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)		A. Overall Summary Description of Vulnerability		B. Hazard Impact		§201.6(c)(2)(ii) Assessing Vulnerability: Identifying Structures				§201.6(c)(2)(ii) Assessing Vulnerability: Estimating Potential Losses				A. Loss Estimate		B. Methodology	
	Yes		N	S	N	S	N	S	N	S	N	S	N	S	N	S	N	S
Avalanche	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Erosion	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Storm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam Failure	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earthquake	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expansive Soils	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee Failure	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hailstorm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hurricane	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Subsidence	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landslide	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe Winter Storm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tornado	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volcano	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windstorm	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legend:

- §201.6(c)(2)(ii) Assessing Vulnerability: Overview
 - A. Does the **new or updated** plan include an overall summary description of the jurisdiction's vulnerability to each hazard?
 - B. Does the **new or updated** plan address the impact of each hazard on the jurisdiction?
- §201.6(c)(2)(ii)(A) Assessing Vulnerability: Identifying Structures
 - A. Does the **new or updated** plan describe vulnerability in terms of the types and numbers of existing buildings, infrastructure, and critical facilities located in the identified hazard areas?
- §201.6(c)(2)(ii)(B) Assessing Vulnerability: Estimating Potential Losses
 - A. Does the **new or updated** plan estimate potential dollar losses to vulnerable structures?
 - B. Does the **new or updated** plan describe the methodology used to prepare the estimate?

MATRIX C: IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS

This matrix can assist FEMA and the State in scoring each hazard. Local jurisdictions may find the matrix useful to ensure consideration of a range of actions for each hazard. **Completing the matrix is not required.**

Note: First, check which hazards are identified in requirement §201.6(c)(2)(i). Then, place a checkmark in either the N or S box for each applicable hazard. An "N" for any identified hazard will result in a "Needs Improvement" score for this requirement. List the hazard and its related shortcoming in the comments section of the Plan Review Crosswalk.



Hazard Type	Hazards Identified Per Requirement §201.6(c)(2)(i)		A. Comprehensive Range of Actions and Projects	
	Yes	No	N	S
Avalanche	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dam Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expansive Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Levee Failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hailstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hurricane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Subsidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landslide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe Winter Storm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tornado	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volcano	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windstorm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legend:
 §201.6(c)(3)(ii) Identification and Analysis of Mitigation Actions
 A. Does the **new or updated** plan identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard?

**APPENDIX D
PUBLIC HEARING DOCUMENTATION/
ADOPTION RESOLUTIONS**

**APPENDIX D
PUBLIC HEARING DOCUMENTATION/ADOPTION RESOLUTIONS**

Caldwell County

**RESOLUTION ADOPTING THE
CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE**

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the (Insert Municipality) actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the (Insert Municipality) hereby:

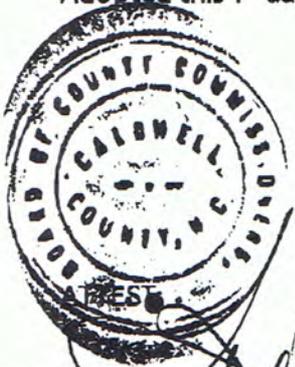
1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the (Insert Municipality); and

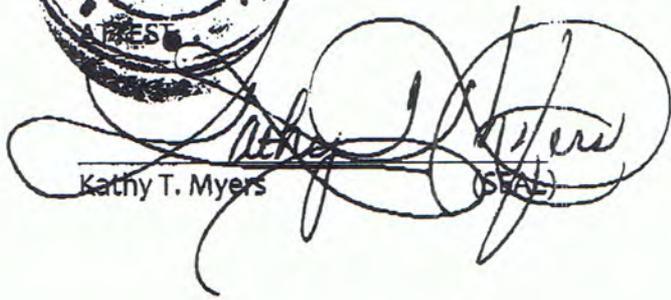
3. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

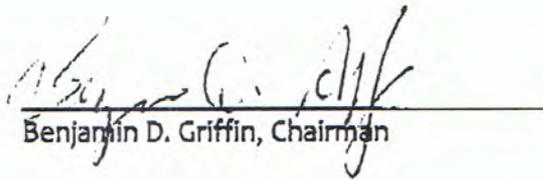
4. Appoints the Town Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.

5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 1st day of November, 2010.




Kathy T. Myers (Seal)


Benjamin D. Griffin, Chairman

Council

Ronnie Setzer, Mayor
Jerry Woods, Mayor Pro Tem
Lois Andes
Jeff Bolick
Allen Stewart



Town Manager

Connie T. South
conniesouth@cajahmtn.com

TOWN OF CAJAH'S MOUNTAIN

1800 Connelly Springs Road
Lenoir, North Carolina 28645
Phone (828) 728-5053 • Fax (828) 728-4166

TOWN OF CAJAH'S MOUNTAIN

**RESOLUTION ADOPTING THE
CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD
MITIGATION PLAN UPDATE**

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

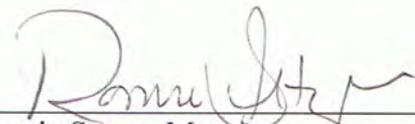
WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the Town of Cajah's Mountain actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

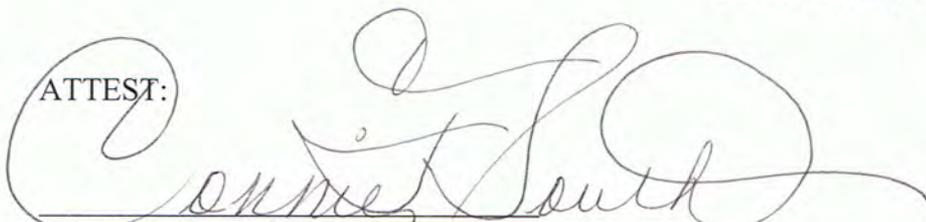
NOW, THEREFORE, be it resolved that the Town Council of the Town of Cahah's Mountain hereby:

1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Cahah's Mountain; and
3. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.
4. Appoints the Town Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 16th day of November, 2010.



Ronnie Setzer, Mayor

ATTEST:


Connie T. South, Town Clerk



**NORTH CAROLINA,
CALDWELL COUNTY,**

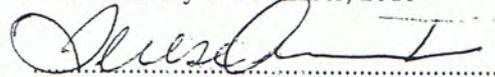
AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared **Terese Almquist** who being first duly sworn, deposes and says: that she is **Publisher** of Lenoir Newspapers, Inc., engaged in the publication of a newspaper known as Lenoir News-Topic, published, issued, and entered as second class mail in the City of Lenoir, in said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in Lenoir News-Topic on the following dates:

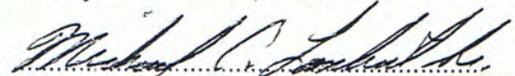
Nov. 5, 12

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

This 12th day of November, 2010



Sworn to and subscribed before me, this 12th day of November, 2010



Notary Public

My Commission expires: 5-15-2012

**TOWN OF
CAJAH'S MOUNTAIN
NOTICE OF
PUBLIC HEARING
ON THE CALDWELL
COUNTY
MULTI-JURISDICTIONAL
2010 HAZARD
MITIGATION PLAN UPDATE**

Notice is hereby given that the Cajah's Mountain Town Council will conduct a public hearing on Tuesday, November 16, 2010, at 6:00 p.m. in the Meeting Room of the Cajah's Mountain Town Hall, 1800 Connelly Springs Road Lenoir, NC 28645 to discuss the Caldwell County Multi-Jurisdictional 2010 Hazard Mitigation Plan Update. Following the public hearing, the Council will consider adoption of the plan. A copy of the plan is available for public review at the Town Hall. The public is encouraged to review the draft plan.

All interested parties are invited to attend and will be given the opportunity to be heard. The Town of Cajah's Mountain does not discriminate on the basis of disability. If you need an auxiliary aid or service or other accommodation in order to attend or fully participate at this meeting, please contact Town Manager Connie South as far in advance of the meeting as possible so that your request can be considered.

For further information regarding this public hearing, please contact Connie South at 828-728-5053 or 828-850-3726.

**Connie T. South
Town Manager**

November 5, 12

Village of Cedar Rock
RESOLUTION ADOPTING THE
CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the Village of Cedar Rock actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Village of Cedar Rock hereby:

1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Village of Cedar Rock; and

3. Vests the Mayor with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.
4. Appoints the Mayor to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 22 day of FEB., 2011.



Mayor, Village of Cedar Rock

ATTEST:



Council Member (SEAL)



**NORTH CAROLINA,
CALDWELL COUNTY,
AFFIDAVIT OF PUBLICATION**

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared **Terese Almquist** who being first duly sworn, deposes and says: that she is **Publisher** of Lenoir Newspapers, Inc., engaged in the publication of a newspaper known as Lenoir News-Topic, published, issued, and entered as second class mail in the City of Lenoir, in said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in Lenoir News-Topic on the following dates:

Feb. 1, 8

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

This 8th day of February, 2011

Terese Almquist

Sworn to and subscribed before me, this 8th day of February, 2011

Michael C. Lambert, Jr.

Notary Public

My Commission expires: *5-15-2012*

**NOTICE OF
PUBLIC HEARING
ON THE
CALDWELL COUNTY
MULTI-JURISDICTIONAL
2010 HAZARD MITIGATION
PLAN UPDATE**

Notice is hereby given that the Village of Cedar Rock Council will conduct a public hearing, to discuss the Caldwell County Multi-Jurisdictional 2010 Hazard Mitigation Plan Update. Following the public hearing the Council will consider adoption of the plan. All citizens are encouraged to attend.

A copy of the plan is available for public review at the Village office entrance way. The public is encouraged to review the draft plan.

For questions and/or additional information, please contact Bob Floyd at 828-758-1959

Feb. 1, 8, 2011

TOWN OF GAMEWELL

RESOLUTION ADOPTING THE CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

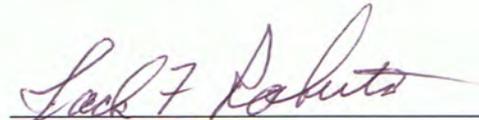
WHEREAS, the Town of Gamewell actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Gamewell hereby:

1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Gamewell; and
3. Vests the Town Administrator with the responsibility, authority, and the means to:

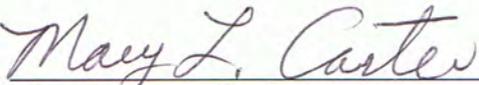
- (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.
- 4. Appoints the Town Administrator to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
 - 5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 11th day of January, 2011



Jack Roberts, Mayor

ATTEST:



Mary L. Carter, Town Clerk

(SEAL)



TOWN OF GRANITE FALLS

RESOLUTION ADOPTING THE
CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

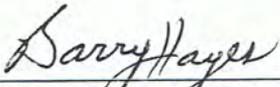
WHEREAS, the Town of Granite Falls actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Granite Falls hereby:

1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Granite Falls; and
3. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

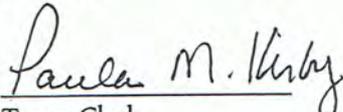
4. Appoints the Town Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 4th day of April, 2011.

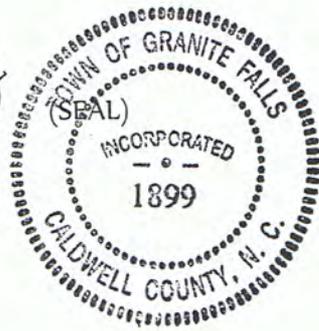


Mayor, Town of Granite Falls

ATTEST:



Town Clerk



**NORTH CAROLINA,
CALDWELL COUNTY,**

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared **Terese Almquist** who being first duly sworn, deposes and says: that she is **Publisher** of Lenoir Newspapers, Inc., engaged in the publication of a newspaper known as Lenoir News-Topic, published, issued, and entered as second class mail in the City of Lenoir, in said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in Lenoir News-Topic on the following dates:

Mar. 15, 22

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

This 22nd day of March, 2011

.....*Terese Almquist*.....

Sworn to and subscribed before me, this
22nd day of March, 2011

.....*Michael C. Lambert Sr.*.....
Notary Public

My Commission expires: *5-15-2012*

**NOTICE OF
PUBLIC HEARING**

Notice is hereby given that the Granite Falls Town Council will conduct a public hearing on April 4, 2011 at 6pm in the Town Council Chamber at 4 South Main Street to discuss the Caldwell County Multi-Jurisdictional 2010 Hazard Mitigation Plan Update. Following the public hearing, the Council will consider adoption of the plan. All citizens are encouraged to attend.

A copy of the plan is available for public review at the Town Hall. The public is encouraged to review the draft plan. For questions and/or additional information, please contact Greg Wilson, Town Planner at 396-3131.

**Greg Wilson
Town Planner**

Mar. 15, 22

Bill J. Beane
Mayor

Rebecca M. Bentley
Town Manager
rbentleytoh@charter.net



Town Commissioners

Tony Colvard
Skip Downs
Jimmy Hemphill
Carl Wagner
Bill Warren
Janet Winkler

TOWN OF HUDSON

RESOLUTION ADOPTING THE CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property; and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 - Senate Bill 300 effective July 1, 2001), states in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years"; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the Town of Hudson actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA.

NOW, THEREFORE, be it resolved that the Board of Commissioners of the Town of Hudson hereby:

1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Hudson; and
3. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.
4. Appoints the Town Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 15th day of February, 2011.


~~Bill J. Beane, Mayor~~

ATTEST:


Tamra T. Swanson, Town Clerk (SEAL)



**NORTH CAROLINA,
CALDWELL COUNTY,
AFFIDAVIT OF PUBLICATION**

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared **Terese Almquist** who being first duly sworn, deposes and says: that she is **Publisher** of Lenoir Newspapers, Inc., engaged in the publication of a newspaper known as Lenoir News-Topic, published, issued, and entered as second class mail in the City of Lenoir, in said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in Lenoir News-Topic on the following dates:

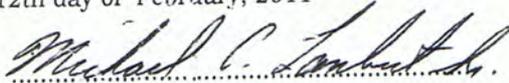
Feb. 4, 12

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

This 12th day of February, 2011


.....

Sworn to and subscribed before me, this
12th day of February, 2011


.....

Notary Public

My Commission expires: 5-15-2012

**Town of Hudson
NOTICE OF
PUBLIC HEARING
ON THE
CALDWELL COUNTY
MULTI-JURISDICTIONAL
2010 HAZARD
MITIGATION PLAN UPDATE**
Notice is hereby given that the Town of Hudson Board of Commissioners will conduct a public hearing on Tuesday, February 15, 2011, at 6:30 pm, at the Hudson Town Hall, located at 550 Central Street, Hudson, to discuss the Caldwell County Multi-Jurisdictional 2010 Hazard Mitigation Plan Update. Following the public hearing, the Board of Commissioners will consider adoption of the plan. All citizens are encouraged to attend.
A copy of the plan is available for public review at the Hudson Town Hall. The public is encouraged to review the draft plan.
For questions and/or additional information, please contact the Hudson Town Hall at 728-8272.
**Tamra T. Swanson
Town Clerk**
Feb. 4, 12



CITY MANAGER
W. LANE BAILEY

CITY OF LENOIR
NORTH CAROLINA

MAYOR
DAVID W. BARLOW

CITY COUNCIL
J. L. GIBBONS
T. H. PERDUE
M. F. PERRY
H. L. PRICE
T. J. ROHR
D. F. STEVENS
R. R. STILWELL

CITY OF LENOIR
RESOLUTION ADOPTING THE
CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION
PLAN UPDATE

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the County desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the City of Lenoir actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

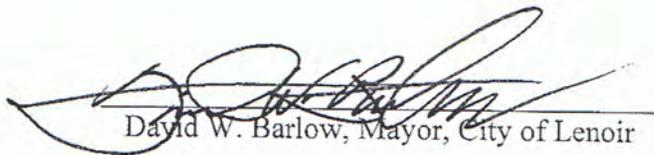
NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Lenoir hereby:



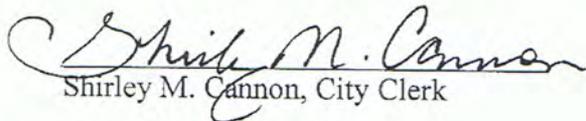
1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the City of Lenoir; and
3. Vests the City Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.
4. Appoints the City Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 5th day of April, 2011.

SEAL


David W. Barlow, Mayor, City of Lenoir

ATTEST:


Shirley M. Cannon, City Clerk

**NORTH CAROLINA,
CALDWELL COUNTY,
AFFIDAVIT OF PUBLICATION**

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared **Terese Almquist** who being first duly sworn, deposes and says: that she is **Publisher** of Lenoir Newspapers, Inc., engaged in the publication of a newspaper known as Lenoir News-Topic, published, issued, and entered as second class mail in the City of Lenoir, in said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in Lenoir News-Topic on the following dates:

July 8, 15

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

This 15th day of July, 2011

.....*Terese Almquist*.....

Sworn to and subscribed before me, this 15th day of July, 2011

.....*Michael C. Lambert Jr.*.....

Notary Public

My Commission expires: 5-15-2012

**NOTICE OF
PUBLIC HEARING**
The public will hereby take notice that the Lenoir City Council will conduct a public hearing to consider a five-year update to the County-wide Hazard Mitigation Plan. The purpose of the HMP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. This hearing will be held Tuesday, July 19, 2011, at 6:00 pm in the City-County Meeting Room located at 905 West Avenue, Lenoir. Interested parties are invited to attend.
Lora Thompson
City of Lenoir
Planning Department
July 8, 15

TOWN OF RHODHISS

RESOLUTION ADOPTING THE
CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) “For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the Town of Rhodhiss actively participated in the planning process of the multi-jurisdictional Caldwell County plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Rhodhiss hereby:

1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Rhodhiss; and
3. Vests the Town Manager with the responsibility, authority, and the means to:
 - (a) Inform all concerned parties of this action.
 - (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

Adopted this 14th day of June, 2011.

Rick Justice
Mayor, Town of Rhodhiss

ATTEST:

Barbara Harma
Town Clerk

(SEAL)



**NORTH CAROLINA,
CALDWELL COUNTY,
AFFIDAVIT OF PUBLICATION**

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared **Terese Almquist** who being first duly sworn, deposes and says: that she is **Publisher** of Lenoir Newspapers, Inc., engaged in the publication of a newspaper known as Lenoir News-Topic, published, issued, and entered as second class mail in the City of Lenoir, in said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in Lenoir News-Topic on the following dates:

June 1

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

This 1st day of June, 2011

Terese Almquist

Sworn to and subscribed before me, this 1st day of June, 2011

Michael C. Lambert Jr.

Notary Public

My Commission expires: *5-15-2012*

**Notice of
Public Hearing**

Notice is hereby given that the Town of Rhodhiss will conduct two public hearings on June 14, 2011, at Ray Childers School located at 1183 Cape Hickory Road.

The proposed FY 2011-2012 Budget for the Town of Rhodhiss has been presented to the Rhodhiss Board of Commissioners. The public hearing on the proposed budget will begin at 6:30 PM and a public hearing on the discussion of the Caldwell County Multi-Jurisdictional 2010 Hazard Mitigation Plan Update will follow. The 2011-12 FY

Budget and the Hazard Mitigation Plan are available for public inspection in the office of the Clerk at the Town Hall during the hours of operation. Following the public hearings, the Council will consider adoption of the FY 2011-2012 Budget and the Hazard Mitigation Plan. All interested parties are invited to attend and will be given the opportunity to be heard. For further information, you may contact the town office at (828) 396-8400. Notice is hereby given in accordance with NC General Statutes.

June 1



MAYOR
Bob Gibbs

TOWN ADMINISTRATOR
Seth Eckard

**TOWN
COUNCIL**

Gerelene Blevins, Mayor Pro-Tem
Beverly Fry
Joe Norman
Donnie Potter
Joe Wesson

The Town of Sawmills

RESOLUTION ADOPTING THE CALDWELL COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, The citizens and property within Caldwell County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, I.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214-Senate Bill 300 effective July 1, 2001), states in item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act that is updated every five years"; and

WHEREAS, it is the intent of the Board of Commissioners of Caldwell County to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop and All-Hazards Mitigation Plan and update it every five years in order to receive future hazard Mitigation Grant Program Funds; and

Town of Sawmills

4076 US Highway 321-A * Sawmills NC * (828)396-7903 * (828)396-8955 fax

<http://www.townofsawmills.com/>

The Town of Sawmills does not discriminate on the basis of age, sex, race, religion, national origin, disability, political affiliation, or marital status.

WHEREAS, the Town of Sawmills actively participated in the planning process of the multi-jurisdictional Caldwell County plan and fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Sawmills hereby:

1. Adopts the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan; and
 2. Separately adopts the sections of the plan that are specific to the Town of Sawmills;
- and

3. Vests the Town Manager with the responsibility, authority, and the means to:

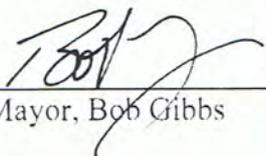
(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Manager to assure that, in cooperation with Caldwell County, the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.

5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2010 Caldwell County Multi-Jurisdictional Hazard Mitigation Plan.

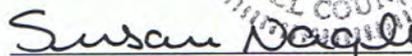
Adopted this 15TH day of MARCH, 2011.



Mayor, Bob Gibbs

ATTEST:





Town Clerk (SEAL)
Susan Nagle

**NORTH CAROLINA,
CALDWELL COUNTY,
AFFIDAVIT OF PUBLICATION**

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared **Terese Almquist** who being first duly sworn, deposes and says: that she is **Publisher** of Lenoir Newspapers, Inc., engaged in the publication of a newspaper known as Lenoir News-Topic, published, issued, and entered as second class mail in the City of Lenoir, in said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in Lenoir News-Topic on the following dates:

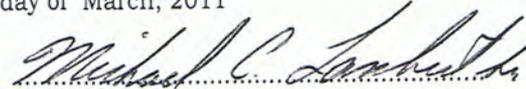
Mar. 4, 11

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

This 11th day of March, 2011



Sworn to and subscribed before me, this 11th day of March, 2011



Notary Public

My Commission expires: 5-15-2011

**NOTICE OF
PUBLIC HEARING
ON THE
CALDWELL COUNTY
MULTI-JURISDICTIONAL
2010 HAZARD
MITIGATION
PLAN UPDATE**

Notice is hereby given that the Sawmills Town Council will conduct a public hearing on Tuesday, March 15, 2011 at 6:00 p.m., in the Meeting Room of the Sawmills Town Hall, 4076 US Hwy 321-A Sawmills, NC 28630, to discuss the Caldwell County Multi-Jurisdictional 2010 Hazard Mitigation Plan Update. Following the public hearing, the Council will consider adoption of the plan. A copy of the plan is available for public review at the Town Hall. The public is encouraged to review the draft plan.

All interested parties are invited to attend and will be given the opportunity to be heard. The Town of Sawmills does not discriminate on the basis of disability.

For further information regarding this public hearing, please contact Mayor Bob Gibbs at 828-396-7903 or 828-612-8790.

**Mayor Bob Gibbs
Town of Sawmills**

Mar. 4, 11

APPENDIX E
Hazard Inventory

**APPENDIX E
HAZARD INVENTORY**

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
<u>77 NCZ033>037 - 048>059 - 062>072 - 082</u>	4/1/1997	12:00 AM	Cold	N/A	0	0	0	0
<u>108 NCZ034>037 - 054>057</u>	11/10/1998	12:00 AM	Dense Fog	N/A	0	0	0	0
<u>106 NCZ033>037 - 048>059 - 062>072 - 082</u>	10/1/1998	12:00 AM	Drought	N/A	0	0	0	0
<u>107 NCZ033>037 - 048>059 - 062>072 - 082</u>	11/1/1998	12:00 AM	Drought	N/A	0	0	0	0
<u>126 NCZ034>037 - 054>057 - 066>072 - 082</u>	7/1/1999	12:00 AM	Drought	N/A	0	0	0	0
<u>129 NCZ033>037 - 048>059 - 062>072 - 082</u>	8/1/1999	12:00 AM	Drought	N/A	0	0	0	0
<u>134 NCZ033>037 - 048>059 - 062>072 - 082</u>	9/1/1999	12:00 AM	Drought	N/A	0	0	0	0
<u>135 NCZ033>037 - 048>059 - 062>072 - 082</u>	10/1/1999	12:00 AM	Drought	N/A	0	0	0	0
<u>146 NCZ033>037 - 048>059 - 062>072 - 082</u>	8/1/2000	12:00 AM	Drought	N/A	0	0	0	0
<u>147 NCZ033>037 - 048>059 - 062>072 - 082</u>	9/1/2000	12:00 AM	Drought	N/A	0	0	0	0
<u>149 NCZ033>037 - 048>059 - 062>072 - 082</u>	10/1/2000	12:00 AM	Drought	N/A	0	0	0	0
<u>150 NCZ033>037 - 048>059 - 062>072 - 082</u>	11/1/2000	12:00 AM	Drought	N/A	0	0	0	0
<u>157 NCZ033>037 - 048>059 - 062>072 - 082</u>	2/1/2001	12:00 AM	Drought	N/A	0	0	0	0
<u>159 NCZ033>037 - 048>059 - 062>072 - 082</u>	3/1/2001	12:00 AM	Drought	N/A	0	0	0	0
<u>162 NCZ033>037 - 048>059 - 062>072 - 082</u>	4/1/2001	12:00 AM	Drought	N/A	0	0	0	0
<u>165 NCZ033>037 - 048>059 - 062>072 - 082</u>	5/1/2001	12:00 AM	Drought	N/A	0	0	0	0

**APPENDIX E
HAZARD INVENTORY**

170 NCZ033>037 - 049>059 - 062>072 - 082	8/1/2001	12:00 AM	Drought	N/A	0	0	0	0
171 NCZ033>037 - 048>059 - 062>072 - 082	11/1/2001	12:00 AM	Drought	N/A	0	0	0	0
172 NCZ033>037 - 048>059 - 062>072 - 082	12/1/2001	12:00 AM	Drought	N/A	0	0	0	0
179 NCZ033>037 - 048>059 - 062>072 - 082	8/1/2002	12:00 AM	Drought	N/A	0	0	0	0
235 NCZ034>037 - 054>057 - 066>072 - 082	5/1/2004	12:00 AM	Drought	N/A	0	0	0	0
306 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	5/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK
307 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	6/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK
311 NCZ033 - 035>037 - 048>052 - 056>059 - 062>065 - 068>072 - 082 - 501	7/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK
312 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	8/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK
316 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	9/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK
317 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	10/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK
318 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	11/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK
319 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	12/1/2007	12:00 AM	Drought	N/A	0	0	OK	OK

**APPENDIX E
HAZARD INVENTORY**

320 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	1/1/2008	12:00 AM	Drought	N/A	0	0	0K	0K
333 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	6/1/2008	12:00 AM	Drought	N/A	0	0	0K	0K
337 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	7/1/2008	12:00 AM	Drought	N/A	0	0	0K	0K
340 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	8/1/2008	12:00 AM	Drought	N/A	0	0	0K	0K
343 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	9/1/2008	12:00 AM	Drought	N/A	0	0	0K	0K
344 NCZ033 - 035 - 048>053 - 056 - 058>059 - 062>065 - 068>069 - 501	10/1/2008	12:00 AM	Drought	N/A	0	0	0K	0K
346 NCZ033 - 035 - 048>053 - 056 - 058>059 - 062>065 - 068>069 - 501	11/1/2008	12:00 AM	Drought	N/A	0	0	0K	0K
105 NCZ033>037 - 048>059 - 062>072 - 082	7/1/1998	12:00 AM	Dry Weather	N/A	0	0	0	0
32 Statewide	1/15/1994	0	Extreme Cold	N/A	3	0	500K	0
33 Statewide	1/19/1994	0	Extreme Cold	N/A	6	0	0	0
153 NCZ033>037 - 048>059 - 062>072 - 082	12/1/2000	12:00 AM	Extreme Cold	N/A	0	0	0	0
35 CALDWELL	7/20/1994	2245	Flash Flood	N/A	0	0	50K	50K
43 Northern	10/5/1995	600	Flash Flood	N/A	0	0	0	0
60 Draco	8/3/1996	3:45 AM	Flash Flood	N/A	0	0	0	0
61 Mortimer	8/11/1996	4:45 AM	Flash Flood	N/A	0	0	0	0
62 Collettsville	8/11/1996	7:45 AM	Flash Flood	N/A	0	0	0	0
63 Edgemont	8/11/1996	10:45 PM	Flash Flood	N/A	0	0	0	0
64 Collettsville	8/12/1996	10:00 AM	Flash Flood	N/A	0	0	0	0
93 Lenoir	4/17/1998	1:00 AM	Flash Flood	N/A	0	0	0	0
148 Lenoir	9/2/2000	12:00 PM	Flash Flood	N/A	0	0	0	0
166 Lenoir	7/2/2001	11:15 PM	Flash Flood	N/A	0	0	50K	0
169 Lenoir	7/25/2001	5:00 PM	Flash Flood	N/A	0	0	0	0
198 Lenoir	6/14/2003	5:00 PM	Flash Flood	N/A	0	0	0	0
199 Lenoir	6/15/2003	2:40 PM	Flash Flood	N/A	0	0	0	0
200 Lenoir	6/18/2003	10:00 PM	Flash Flood	N/A	0	0	0	0

**APPENDIX E
HAZARD INVENTORY**

201 Lenoir	6/19/2003	12:00 AM	Flash Flood	N/A	0	0	0	0
205 Mortimer	7/5/2003	2:00 PM	Flash Flood	N/A	0	0	0	0
206 Lenoir	7/6/2003	6:30 PM	Flash Flood	N/A	0	0	20K	0
215 Lenoir	8/6/2003	7:00 PM	Flash Flood	N/A	0	0	5K	0
216 Lenoir	8/7/2003	2:30 PM	Flash Flood	N/A	0	0	0	0
238 Lenoir	5/22/2004	2:30 PM	Flash Flood	N/A	0	0	0	0
241 Lenoir	6/21/2004	7:45 PM	Flash Flood	N/A	0	0	0	0
262 Lenoir	6/7/2005	7:30 PM	Flash Flood	N/A	0	0	15K	0
263 Lenoir	6/8/2005	6:30 PM	Flash Flood	N/A	0	0	0	0
266 Lenoir	7/3/2005	11:30 PM	Flash Flood	N/A	0	0	20K	0
272 West Portion	8/18/2005	1:00 AM	Flash Flood	N/A	0	0	0	0
342 Collettsville	8/26/2008	23:30 PM	Flash Flood	N/A	0	0	0K	0K
355 Yadkin Vly	5/16/2009	18:45 PM	Flash Flood	N/A	0	0	0K	0K
361 Lenoir	6/10/2009	17:15 PM	Flash Flood	N/A	0	0	20K	0K
30 NCZ001>510	3/23/1993	1200	Flash Floods	N/A	0	0	0	0
49 NCZ034 - 048>049 - 051>055 - 059 - 062 - 064>067 - 082	1/26/1996	8:55 PM	Flood	N/A	0	0	30K	0
89 Collettsville	1/8/1998	1:00 AM	Flood	N/A	0	0	0	0
92 West Portion	3/20/1998	10:30 AM	Flood	N/A	0	0	0	0
193 NCZ034	4/10/2003	1:00 PM	Flood	N/A	0	0	0	0
219 NCZ034	11/19/2003	7:00 AM	Flood	N/A	0	0	5K	0
244 NCZ034	9/2/2004	10:45 AM	Flood	N/A	0	0	0	0
245 NCZ033>034 - 049>050 - 054>055	9/7/2004	5:30 PM	Flood	N/A	0	0	25.0M	5.5M
249 NCZ033>034 - 050 - 054>055	9/17/2004	1:00 AM	Flood	N/A	0	0	8.2M	4.0M
267 NCZ034	7/4/2005	2:00 AM	Flood	N/A	0	0	0	0
268 NCZ034	7/7/2005	1:00 PM	Flood	N/A	0	0	0	0
273 NCZ034	8/18/2005	3:30 AM	Flood	N/A	0	0	0	0
73 NCZ034>035 - 054>056 - 066>070	1/31/1997	5:00 AM	Fog	N/A	0	0	0	0
137 NCZ034>037 - 054>057 - 066>072 - 082	12/13/1999	7:00 PM	Fog	N/A	0	0	0	0
277 NCZ033>037 - 053>057 - 063>070	12/16/2005	12:00 AM	Freezing Fog	N/A	0	0	0	0
113 NCZ034>037 - 054>057 - 066>070	2/1/1999	12:00 AM	Freezing Rain	N/A	0	0	0	0
143 NCZ034>037 - 054>057 - 059 - 062>063 - 066>069	1/29/2000	9:00 PM	Freezing Rain	N/A	0	0	0	0
155 NCZ033>036 - 049>050 - 054>056 - 068>069	12/13/2000	5:00 PM	Freezing Rain	N/A	0	0	0	0
109 NCZ034 - 037 - 054 - 056>057 - 065 - 069 - 072	12/23/1998	9:00 AM	Freezing Rain/sleet	N/A	0	0	0	0

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233 NCZ034>037 - 054>057 - 066>072 - 082	3/27/2004	12:00 AM	Frost/freeze	N/A	0	0	0	0
301 NCZ033 - 035>037 - 048>053 - 056>059 - 062>065 - 068>072 - 082 - 501	4/8/2007	1:00 AM	Frost/freeze	N/A	0	0	OK	1.0M
76 NCZ034>036 - 054>057 - 066>072 - 082	3/31/1997	9:00 AM	Gusty Winds	N/A	0	2	0	0
121 NCZ033>034 - 048>054 - 058>059 - 062>067	3/16/1999	1:00 PM	Gusty Winds	N/A	0	0	0	0
151 NCZ033>037 - 048>059 - 062>072 - 082	11/9/2000	12:00 PM	Gusty Winds	N/A	0	0	0	0
180 NCZ033>034 - 048>055 - 058>059 - 062>067	9/26/2002	9:00 PM	Gusty Winds	N/A	0	0	0	0
7 CALDWELL	6/20/1974	1300	Hail	0.75 in.	0	0	0	0
8 CALDWELL	5/10/1975	1230	Hail	0.75 in.	0	0	0	0
15 CALDWELL	8/30/1984	1300	Hail	1.75 in.	0	0	0	0
26 CALDWELL	5/1/1990	1600	Hail	1.00 in.	0	0	0	0
27 CALDWELL	6/8/1990	1421	Hail	1.25 in.	0	0	0	0
37 Kings Creek	8/19/1994	1400	Hail	0.75 in.	0	0	0	0
54 Lenoir	5/24/1996	6:54 PM	Hail	0.75 in.	0	0	0	0
55 Collettsville	5/24/1996	7:08 PM	Hail	0.75 in.	0	0	0	0
56 Lenoir	5/24/1996	8:22 PM	Hail	1.00 in.	0	0	0	0
57 Lenoir	5/24/1996	9:05 PM	Hail	1.00 in.	0	0	0	0
78 Baton	6/2/1997	6:45 AM	Hail	0.75 in.	0	0	0	0
79 Lenoir	6/2/1997	7:00 AM	Hail	0.75 in.	0	0	0	0
80 Lenoir	6/2/1997	8:24 AM	Hail	0.75 in.	0	0	0	0
84 Lenoir	6/26/1997	5:15 PM	Hail	1.75 in.	0	0	0	0
87 Globe	7/16/1997	11:50 AM	Hail	0.75 in.	0	0	0	0
95 Collettsville	5/27/1998	1:30 PM	Hail	0.75 in.	0	0	0	0
97 Lenoir	5/30/1998	2:37 PM	Hail	0.75 in.	0	0	0	0
99 Granite Falls	6/11/1998	2:15 PM	Hail	0.75 in.	0	0	0	0
100 Collettsville	6/16/1998	1:00 PM	Hail	2.00 in.	0	0	0	0
102 Kings Creek	6/16/1998	1:20 PM	Hail	2.00 in.	0	0	0	0
130 Collettsville	8/20/1999	2:30 AM	Hail	0.75 in.	0	0	0	0
131 Collettsville	8/23/1999	5:45 PM	Hail	1.00 in.	0	0	0	0
178 Kings Creek	7/4/2002	5:15 PM	Hail	1.00 in.	0	0	0	0
195 Granite Falls	5/3/2003	5:19 PM	Hail	0.88 in.	0	0	0	0
196 Lenoir	5/15/2003	3:20 PM	Hail	1.75 in.	0	0	0	0
202 Lenoir	6/30/2003	1:00 PM	Hail	0.88 in.	0	0	0	0
209 Lenoir	7/12/2003	6:46 PM	Hail	0.75 in.	0	0	0	0
210 Lenoir	7/16/2003	3:20 PM	Hail	0.75 in.	0	0	0	0
211 Collettsville	7/18/2003	3:10 PM	Hail	0.88 in.	0	0	0	0
236 Lenoir	5/22/2004	1:35 PM	Hail	1.50 in.	0	0	0	0
237 Lenoir	5/22/2004	1:55 PM	Hail	1.50 in.	0	0	50K	0

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239 Lenoir	5/22/2004	2:50 PM	Hail	0.75 in.	0	0	0	0
242 Lenoir	7/4/2004	4:05 PM	Hail	0.75 in.	0	0	0	0
259 Lenoir	5/10/2005	3:54 PM	Hail	0.88 in.	0	0	0	0
265 Granite Falls	6/19/2005	3:50 PM	Hail	0.75 in.	0	0	0	0
282 Granite Falls	4/3/2006	5:45 AM	Hail	0.75 in.	0	0	0	0
284 Lenoir	4/8/2006	3:55 AM	Hail	0.88 in.	0	0	0	0
285 Granite Falls	4/25/2006	6:47 PM	Hail	1.75 in.	0	0	0	0
286 Gamewell	5/14/2006	12:19 PM	Hail	0.75 in.	0	0	0	0
287 Granite Falls	6/22/2006	3:10 PM	Hail	0.75 in.	0	0	0	0
289 Lenoir	7/28/2006	6:58 PM	Hail	0.75 in.	0	0	0	0
293 Patterson	10/5/2006	16:00 PM	Hail	0.75 in.	0	0	OK	OK
294 Lenoir	11/11/2006	18:00 PM	Hail	0.75 in.	0	0	OK	OK
302 Gamewell	4/15/2007	12:00 PM	Hail	1.00 in.	0	0	OK	OK
303 Lenoir	4/15/2007	12:13 PM	Hail	0.75 in.	0	0	OK	OK
308 Lenoir	6/11/2007	16:10 PM	Hail	1.25 in.	0	0	OK	OK
309 Granite Falls	6/12/2007	17:05 PM	Hail	0.75 in.	0	0	OK	OK
310 Patterson	6/28/2007	12:35 PM	Hail	0.75 in.	0	0	OK	OK
314 Lenoir	8/23/2007	18:55 PM	Hail	0.75 in.	0	0	OK	OK
329 Collettsville	5/8/2008	18:38 PM	Hail	1.75 in.	0	0	OK	OK
330 Lenoir	5/8/2008	19:00 PM	Hail	1.00 in.	0	0	OK	OK
331 Patterson	5/11/2008	14:47 PM	Hail	0.75 in.	0	0	OK	OK
335 Patterson	6/22/2008	12:55 PM	Hail	1.00 in.	0	0	OK	OK
338 Grandin	7/7/2008	18:15 PM	Hail	0.75 in.	0	0	OK	OK
341 Lenoir	8/14/2008	13:35 PM	Hail	0.75 in.	0	0	OK	OK
354 Kings Creek	5/16/2009	17:48 PM	Hail	0.75 in.	0	0	OK	OK
357 Collettsville	6/2/2009	16:35 PM	Hail	1.00 in.	0	0	OK	OK
359 Mortimer	6/2/2009	16:45 PM	Hail	1.50 in.	0	0	OK	OK
360 Oak Hill	6/3/2009	17:10 PM	Hail	0.75 in.	0	0	OK	OK
356 Piney	5/28/2009	15:35 PM	Heavy Rain	N/A	0	0	OK	OK
168 Lenoir	7/10/2001	11:00 PM	Heavy Rain Effects	N/A	0	0	0	0
31 Northern And Central	1/3/1994	1800	Heavy Snow	N/A	0	0	0	0
46 NCZ034>037 - 054>057 - 066 - 069	1/6/1996	8:00 PM	Heavy Snow	N/A	0	0	0	0
68 NCZ033>037 - 048 - 059 - 062>067	12/18/1996	6:00 PM	Heavy Snow	N/A	0	0	0	0
88 NCZ034>037 - 054>057 - 062 - 069	12/29/1997	5:30 AM	Heavy Snow	N/A	0	0	0	0
90 NCZ033>034 - 048>055 - 058>059 - 062>067	1/27/1998	4:00 AM	Heavy Snow	N/A	0	0	0	0
120 NCZ033>034 - 049>050 - 054>055	3/9/1999	3:00 AM	Heavy Snow	N/A	0	0	0	0
140 NCZ033>037 - 055>057 - 069	1/18/2000	4:00 AM	Heavy Snow	N/A	0	0	0	0
142 NCZ033>037 - 048>056 - 058>059 - 062>072 - 082	1/22/2000	3:00 PM	Heavy Snow	N/A	0	0	0	0

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173 NCZ034>037 - 055>057 - 062 - 067>070 - 072	1/3/2002	12:00 AM	Heavy Snow	N/A	0	0	0	0
182 NCZ034>037 - 054>057	12/4/2002	2:00 PM	Heavy Snow	N/A	0	0	0	0
185 NCZ034>035 - 054>055	1/16/2003	8:00 PM	Heavy Snow	N/A	0	0	0	0
186 NCZ033>037 - 048>057 - 066>069	1/23/2003	4:00 AM	Heavy Snow	N/A	0	0	0	0
225 NCZ033>037 - 048>050 - 053>057 - 062>067	1/25/2004	12:00 PM	Heavy Snow	N/A	0	0	0	0
231 NCZ034>035 - 037	2/26/2004	3:00 PM	Heavy Snow	N/A	0	0	0	0
256 NCZ033>034 - 049>050 - 053>055 - 064>065	2/28/2005	3:00 AM	Heavy Snow	N/A	0	0	0	0
322 NCZ033 - 035 - 049 - 052>053 - 056 - 059 - 501	1/16/2008	20:00 PM	Heavy Snow	N/A	0	0	0K	0K
48 NCZ033>037 - 048>058 - 065>072	1/18/1996	8:00 PM	High Wind	0 kts.	0	0	75K	0
83 NCZ034	6/21/1997	5:30 PM	High Wind	50 kts.	0	0	0	0
91 NCZ034>037 - 054>057 - 066>072 - 082	2/24/1998	9:00 AM	High Wind	50 kts.	0	0	20K	0
118 NCZ034 - 053 - 057 - 068>070 - 072	3/3/1999	11:00 AM	High Wind	60 kts.	0	0	700K	0
136 NCZ033>034 - 048 - 050 - 050 - 052>054 - 063>065	11/2/1999	2:00 AM	High Wind	55 kts.	0	0	0	0
139 NCZ033>034 - 049>050 - 053>055	1/13/2000	12:00 PM	High Wind	52 kts.	0	0	0	0
160 NCZ034 - 036 - 055 - 057 - 068 - 070	3/6/2001	10:00 AM	High Wind	55 kts.	0	0	0	0
161 NCZ034>036 - 049>050 - 052>057 - 059 - 062>071	3/20/2001	7:00 AM	High Wind	55 kts.	0	0	1.0M	0
164 NCZ034 - 036 - 057 - 068 - 071	4/17/2001	8:00 AM	High Wind	50 kts.	1	0	0	0
174 NCZ034>037 - 054>057 - 066>072 - 082	2/4/2002	12:00 PM	High Wind	50 kts.	0	0	0	0
181 NCZ034 - 050 - 053 - 055>056 - 067	11/6/2002	10:00 AM	High Wind	50 kts.	0	0	0	0
184 NCZ033>034 - 048 - 050 - 053>055 - 062	12/25/2002	10:00 AM	High Wind	50 kts.	0	0	0	0

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187 NCZ034 - 048 - 053 - 059 - 063>066	1/23/2003	8:00 PM	High Wind	60 kts.	0	0	16K	0
217 NCZ033>034 - 048>055 - 058>059 - 064>067	10/14/2003	8:00 PM	High Wind	50 kts.	0	0	18K	0
218 NCZ033>034 - 048>050 - 053>055 - 064>065 - 067	11/13/2003	6:00 AM	High Wind	50 kts.	0	0	25K	0
232 NCZ034>035 - 054>055	3/7/2004	6:30 PM	High Wind	50 kts.	0	0	170K	0
246 NCZ033>034 - 059 - 063>065	9/7/2004	11:00 AM	High Wind	50 kts.	0	0	330K	0
248 NCZ034 - 054>055 - 066>067	9/16/2004	11:00 PM	High Wind	50 kts.	0	0	20K	0
250 NCZ033>035 - 048>055 - 059 - 063>067	9/17/2004	8:00 PM	High Wind	50 kts.	0	0	75K	0
258 NCZ033>034 - 049>050 - 052>055 - 064>067	4/2/2005	8:00 PM	High Wind	60 kts.	0	0	700K	0
278 NCZ034>035	1/14/2006	7:00 PM	High Wind	55 kts.	0	0	0	0
283 NCZ033>034 - 054>055 - 067	4/3/2006	7:00 PM	High Wind	50 kts.	0	0	20K	0
304 NCZ033 - 049 - 053 - 062>065 - 501	4/15/2007	17:00 PM	High Wind	70 kts.	0	0	0K	0K
305 NCZ033 - 035>037 - 048>052 - 056>059 - 062>064 - 068>072 - 501>502 - 508	4/16/2007	9:00 AM	High Wind	60 kts.	0	0	500K	0K
326 NCZ033 - 048>050 - 052>053 - 064>065 - 501>507 - 509	2/10/2008	10:00 AM	High Wind	55 kts.	0	0	0K	0K
332 NCZ033 - 048>050 - 052>053 - 059 - 062>065 - 501 - 503 - 505 - 507 - 510	5/11/2008	20:00 PM	High Wind	60 kts.	0	0	0K	0K
42 NCZ033>034 - 048>054 - 058>059 - 062 - 064>065 - 067	10/5/1995	300	High Winds	0 kts.	2	10	15.0M	0
44 Mountains And Foothil	11/11/1995	1200	High Winds	0 kts.	0	0	250K	0
34 Northern Interior And	2/10/1994	1000	Ice Storm	N/A	0	0	0	0
50 NCZ033>037 - 048>058 - 065>066 - 069	1/26/1996	11:00 AM	Ice Storm	N/A	0	0	0	0

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51 NCZ033>037 - 048>057	2/2/1996	3:00 AM	Ice Storm	N/A	0	0	50.0M	0
70 NCZ033>037 - 048>055 - 058>059 - 062>067 - 069	1/9/1997	12:00 AM	Ice Storm	N/A	0	0	2.0M	0
74 NCZ034>037 - 056>057 - 068>071 - 082	2/13/1997	3:00 PM	Ice Storm	N/A	0	0	0	0
111 NCZ034 - 037 - 054 - 056>057 - 065 - 069 - 072	12/24/1998	12:00 AM	Ice Storm	N/A	0	0	0	0
112 NCZ034>035 - 037 - 050 - 053>056 - 065>067	1/2/1999	3:00 PM	Ice Storm	N/A	0	0	0	0
183 NCZ034>037 - 054>057 - 066>067 - 069	12/4/2002	10:00 PM	Ice Storm	N/A	0	0	100.0M	0
228 NCZ034 - 054>055 - 065	2/6/2004	2:00 AM	Ice Storm	N/A	0	0	12K	0
276 NCZ033>034 - 049>050 - 054>055	12/15/2005	10:00 AM	Ice Storm	N/A	0	0	225K	0
325 NCZ033 - 049 - 053 - 064>065 - 501 - 503 - 505 - 507 - 509	2/1/2008	12:00 AM	Ice Storm	N/A	0	0	0K	0K
67 NCZ034>037 - 054>057 - 066 - 070	12/6/1996	5:00 AM	Icy Roads	N/A	0	0	0	0
72 NCZ034	1/23/1997	6:00 AM	Icy Roads	N/A	0	0	0	0
247 NCZ033>034 - 049>050	9/8/2004	12:00 AM	Landslide	N/A	0	0	4.5M	0
261 NCZ034	6/7/2005	7:30 PM	Landslide	N/A	0	0	0	0
81 Joyceton	6/21/1997	4:00 PM	Lightning	N/A	0	0	100K	0
127 Kings Creek	7/7/1999	1:50 PM	Lightning	N/A	0	0	0	0
167 Lenoir	7/2/2001	11:30 PM	Lightning	N/A	0	0	0	0
197 Lenoir	5/31/2003	6:30 AM	Lightning	N/A	0	0	0	0
243 Lenoir	8/24/2004	2:04 PM	Lightning	N/A	0	0	0	0
336 Lenoir	6/27/2008	15:30 PM	Lightning	N/A	0	8	0K	0K
339 Granite Falls	7/13/2008	14:00 PM	Lightning	N/A	0	0	20K	0K
190 NCZ033>034 - 054>055 - 067	2/16/2003	11:00 AM	Sleet Storm	N/A	0	0	0	0
224 NCZ034>037 - 055>057 - 066>072 - 082	1/25/2004	2:00 PM	Sleet Storm	N/A	0	0	0	0
45 Northern Mountains Fo	12/26/1995	200	Snow	N/A	0	0	0	0
52 NCZ034>037 - 054>057 - 067>072	2/3/1996	6:00 PM	Snow	N/A	0	0	0	0
71 NCZ034>037 - 055>057 - 068>072	1/15/1997	2:00 PM	Snow	N/A	0	0	0	0

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110 NCZ034 - 054>055 - 064>067	12/24/1998	10:00 PM	Snow	N/A	0	0	0	0
114 NCZ034 - 048 - 053>055 - 058>059	2/13/1999	8:00 AM	Snow	N/A	0	0	0	0
115 NCZ034>037 - 049>050 - 054>057 - 067>072	2/19/1999	12:00 PM	Snow	N/A	0	0	0	0
116 NCZ034 - 049>050 - 053>055 - 064	2/23/1999	6:00 AM	Snow	N/A	0	0	0	0
117 NCZ034>037 - 048>053 - 056>059 - 063 - 069	2/24/1999	12:00 AM	Snow	N/A	0	0	0	0
119 NCZ034 - 053>054 - 058>059 - 062>065	3/3/1999	12:00 PM	Snow	N/A	0	0	0	0
122 NCZ033>034 - 049>050 - 054>055 - 065>067	3/26/1999	2:00 PM	Snow	N/A	0	0	0	0
123 NCZ033>034 - 048>050 - 052>055 - 059	4/29/1999	4:00 PM	Snow	N/A	0	0	0	0
138 NCZ034>037 - 048>049 - 051>056 - 058>059 - 062>067	12/24/1999	8:00 AM	Snow	N/A	0	0	0	0
141 NCZ034>037 - 051>059 - 064	1/20/2000	4:00 AM	Snow	N/A	0	0	0	0
152 NCZ033>037 - 048>059 - 062>072 - 082	11/19/2000	6:00 AM	Snow	N/A	0	0	0	0
154 NCZ033>034 - 048>055 - 066>068	12/3/2000	3:00 AM	Snow	N/A	0	0	0	0
156 NCZ034>037 - 051>056 - 058>059 - 064>067	12/19/2000	3:00 AM	Snow	N/A	0	0	0	0
66 NCZ034 - 048>055	12/5/1996	12:00 PM	Snow And Ice	N/A	0	0	0	0
69 NCZ033>035 - 048>055 - 058>059 - 062>067	1/8/1997	12:00 PM	Snow And Sleet	N/A	0	0	0	0
163 NCZ034>037 - 053>057 - 065>070	4/17/2001	7:00 AM	Snow Showers	N/A	0	0	0	0
158 NCZ034>037 - 048>049 - 053 - 055>057 - 065 - 067>069	2/22/2001	3:00 AM	Snow/sleet	N/A	0	0	0	0
269 NCZ034	7/7/2005	2:00 PM	Strong Wind	40 kts.	0	1	0	0
279 NCZ034	1/18/2006	1:00 PM	Strong Wind	40 kts.	0	0	5K	0
313 Granite Falls	8/10/2007	13:50 PM	Thunderstorm Wind	55 kts.	0	0	OK	OK

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315 Lenoir	8/23/2007	20:00 PM	Thunderstorm Wind	55 kts.	0	0	0K	0K
328 Lenoir	3/4/2008	18:25 PM	Thunderstorm Wind	60 kts.	0	0	0K	0K
334 Lenoir	6/9/2008	19:40 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
358 Collettsville	6/2/2009	16:35 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
362 Lenoir	6/10/2009	17:18 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
363 Abingdon	7/20/2009	18:30 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
364 Globe	7/27/2009	14:20 PM	Thunderstorm Wind	50 kts.	0	0	0K	0K
38 Lenoir	6/10/1995	1530	Thunderstorm Winds	0 kts.	0	0	100K	0
40 Cumberland	7/18/1995	1239	Thunderstorm Winds	58 kts.	0	0	0	0
41 Cumberland	7/18/1995	1255	Thunderstorm Winds	75 kts.	0	0	0	0
39 Lenoir	7/17/1995	1835	Thunderstorms Winds	N/A	0	0	0	0
5 CALDWELL	5/27/1973	2000	Tornado	F1	0	0	25K	0
6 CALDWELL	4/4/1974	700	Tornado	F2	0	0	250K	0
9 CALDWELL	7/9/1977	1400	Tornado	F0	0	0	25K	0
22 CALDWELL	5/5/1989	1728	Tornado	F2	0	0	250K	0
36 Dudley Shoals	8/16/1994	1842	Tornado	F0	0	0	50K	0
94 Dudley Shoals	5/7/1998	4:49 PM	Tornado	F4	0	2	1.1M	0
1 CALDWELL	7/4/1955	1600	Tstm Wind	0 kts.	0	0	0	0
2 CALDWELL	6/21/1969	1700	Tstm Wind	0 kts.	0	0	0	0
3 CALDWELL	7/19/1969	1530	Tstm Wind	0 kts.	0	0	0	0
4 CALDWELL	6/14/1971	1910	Tstm Wind	0 kts.	0	0	0	0
10 CALDWELL	8/11/1983	2040	Tstm Wind	0 kts.	0	0	0	0
11 CALDWELL	8/21/1983	2130	Tstm Wind	56 kts.	0	0	0	0
12 CALDWELL	6/4/1984	1630	Tstm Wind	0 kts.	0	0	0	0
13 CALDWELL	7/1/1984	2300	Tstm Wind	0 kts.	0	0	0	0
14 CALDWELL	7/13/1984	2030	Tstm Wind	0 kts.	0	0	0	0
16 CALDWELL	8/30/1984	1300	Tstm Wind	0 kts.	0	0	0	0
17 CALDWELL	8/7/1986	1800	Tstm Wind	0 kts.	0	0	0	0
18 CALDWELL	4/15/1987	900	Tstm Wind	0 kts.	0	0	0	0
19 CALDWELL	6/18/1988	1500	Tstm Wind	0 kts.	0	0	0	0
20 CALDWELL	6/18/1988	1602	Tstm Wind	0 kts.	0	0	0	0
21 CALDWELL	7/10/1988	1430	Tstm Wind	0 kts.	0	0	0	0
23 CALDWELL	6/12/1989	1330	Tstm Wind	0 kts.	0	0	0	0
24 CALDWELL	7/26/1989	1659	Tstm Wind	0 kts.	0	0	0	0
25 CALDWELL	7/30/1989	1730	Tstm Wind	0 kts.	0	0	0	0
28 CALDWELL	7/25/1992	1300	Tstm Wind	0 kts.	0	0	0	0
53 Baton	4/29/1996	3:00 PM	Tstm Wind	50 kts.	0	0	0	0
58 Lenoir	5/27/1996	9:30 PM	Tstm Wind	50 kts.	0	0	0	0
59 Lenoir	6/15/1996	12:10 PM	Tstm Wind	50 kts.	0	0	0	0

**APPENDIX E
HAZARD INVENTORY**

65 Collettsville	8/21/1996	4:13 PM	Tstm Wind	50 kts.	0	0	0	0
75 Lenoir	3/5/1997	4:55 PM	Tstm Wind	50 kts.	0	0	0	0
82 Lenoir	6/21/1997	5:04 PM	Tstm Wind	50 kts.	0	0	0	0
85 Lenoir	7/3/1997	2:15 AM	Tstm Wind	50 kts.	0	0	0	0
86 Countywide	7/4/1997	7:05 PM	Tstm Wind	50 kts.	0	0	0	0
96 Collettsville	5/27/1998	1:30 PM	Tstm Wind	52 kts.	0	0	0	0
98 Kings Creek	6/10/1998	6:18 AM	Tstm Wind	50 kts.	0	0	0	0
101 Collettsville	6/16/1998	1:00 PM	Tstm Wind	50 kts.	0	0	0	0
103 Kings Creek	6/16/1998	1:20 PM	Tstm Wind	55 kts.	0	0	0	0
104 Lenoir	6/22/1998	9:30 PM	Tstm Wind	50 kts.	0	0	0	0
124 Patterson	5/7/1999	7:10 PM	Tstm Wind	50 kts.	0	0	0	0
125 Lenoir	6/28/1999	6:34 PM	Tstm Wind	50 kts.	0	0	0	0
128 Kings Creek	7/7/1999	1:50 PM	Tstm Wind	52 kts.	0	0	0	0
132 Collettsville	8/23/1999	5:45 PM	Tstm Wind	50 kts.	0	0	0	0
133 Valmead	8/23/1999	6:00 PM	Tstm Wind	50 kts.	0	0	0	0
144 Granite Falls	5/20/2000	4:17 PM	Tstm Wind	56 kts.	0	0	0	0
145 Countywide	6/25/2000	2:35 PM	Tstm Wind	50 kts.	0	0	0	0
175 Gamewell	6/13/2002	7:17 PM	Tstm Wind	56 kts.	0	0	0	0
176 Saw Mills	6/13/2002	7:25 PM	Tstm Wind	55 kts.	0	0	2K	0
177 Saw Mills	6/13/2002	7:32 PM	Tstm Wind	55 kts.	0	0	2K	0
203 Lenoir	7/4/2003	5:35 PM	Tstm Wind	50 kts.	0	0	1K	0
204 Lenoir	7/5/2003	1:00 PM	Tstm Wind	50 kts.	0	0	0	0
207 Lenoir	7/9/2003	5:00 PM	Tstm Wind	50 kts.	0	0	1K	0
208 Collettsville	7/12/2003	6:38 PM	Tstm Wind	55 kts.	0	0	0	0
212 Lenoir	7/18/2003	4:30 PM	Tstm Wind	50 kts.	0	0	0	0
213 Lenoir	7/22/2003	2:40 PM	Tstm Wind	50 kts.	0	0	0	0
214 Lenoir	8/5/2003	3:00 PM	Tstm Wind	50 kts.	0	0	25K	0
240 Lenoir	5/26/2004	5:50 PM	Tstm Wind	50 kts.	0	0	0	0
260 Lenoir	5/10/2005	3:54 PM	Tstm Wind	50 kts.	0	0	0	0
264 Lenoir	6/8/2005	7:00 PM	Tstm Wind	50 kts.	0	0	0	0
270 Granite Falls	7/28/2005	6:55 PM	Tstm Wind	50 kts.	0	0	0	0
271 Lenoir	8/13/2005	6:58 PM	Tstm Wind	50 kts.	0	0	10K	0
288 Lenoir	7/20/2006	1:55 PM	Tstm Wind	55 kts.	0	0	50K	0
290 Lenoir	7/28/2006	7:02 PM	Tstm Wind	50 kts.	0	0	0	0
291 Lenoir	7/28/2006	8:04 PM	Tstm Wind	50 kts.	0	0	0	0
292 Lenoir	8/7/2006	3:48 PM	Tstm Wind	50 kts.	0	0	0	0
29 Statewide	3/12/1993	1600	Winter Storm	N/A	2	10	50.0M	0
47 NCZ033>037 - 048>058 - 065>072 - 082	1/11/1996	6:00 PM	Winter Storm	N/A	0	0	0	0
188 NCZ034>035 - 037 - 054>055	2/6/2003	11:00 PM	Winter Storm	N/A	0	0	0	0
253 NCZ034 - 054 - 056 - 066>067	1/29/2005	11:00 AM	Winter Storm	N/A	0	0	0	0
352 NCZ033 - 049 - 501 - 503 - 505	3/1/2009	13:00 PM	Winter Storm	N/A	0	0	0K	0K
274 NCZ033>034 - 036>037 - 048>050 - 052>053 - 055>056 - 064 - 066>069	12/8/2005	4:00 PM	Winter Weather	N/A	0	0	0	0

**APPENDIX E
HAZARD INVENTORY**

275 NCZ033>034 - 049>050 - 054>055	12/15/2005	2:00 AM	Winter Weather	N/A	0	0	0	0
280 NCZ033>034 - 048>055 - 058 - 064>065	2/11/2006	2:00 AM	Winter Weather	N/A	0	0	0	0
281 NCZ034>036 - 052>056 - 067>069	3/20/2006	12:00 PM	Winter Weather	N/A	0	0	0	0
295 NCZ053 - 062>065 - 501 - 503 - 505	1/9/2007	10:00 AM	Winter Weather	N/A	0	0	OK	OK
296 NCZ033 - 035>037 - 049>050 - 053 - 056>057 - 063>065 - 068>072 - 082 - 501	1/18/2007	6:00 AM	Winter Weather	N/A	0	0	OK	OK
297 NCZ033 - 048>053 - 058>059 - 062>065 - 501 - 503 - 505>507 - 509	1/21/2007	6:00 AM	Winter Weather	N/A	0	0	OK	OK
298 NCZ053 - 064 - 501	1/28/2007	21:00 PM	Winter Weather	N/A	0	0	OK	OK
299 NCZ033 - 048>050 - 052>053 - 501	2/1/2007	7:00 AM	Winter Weather	N/A	0	0	OK	OK
300 NCZ053 - 059 - 062 - 501 - 503 - 505	2/17/2007	18:00 PM	Winter Weather	N/A	0	0	OK	OK
321 NCZ051 - 053 - 058 - 062>064 - 501 - 510	1/1/2008	22:00 PM	Winter Weather	N/A	0	0	OK	OK
323 NCZ033 - 035 - 048>050 - 052>053 - 056 - 059 - 062>065 - 068 - 501	1/19/2008	11:00 AM	Winter Weather	N/A	0	0	OK	OK
324 NCZ033 - 049 - 053 - 064>065 - 501 - 503 - 505 - 507 - 509	1/31/2008	21:00 PM	Winter Weather	N/A	0	0	OK	OK
327 NCZ035>037 - 056>057 - 502 - 504	2/13/2008	19:00 PM	Winter Weather	N/A	0	0	OK	OK
345 NCZ033 - 048>053 - 058>059 - 062>064 - 501 - 503 - 505	10/27/2008	17:00 PM	Winter Weather	N/A	0	0	OK	OK
347 NCZ033 - 048>050 - 052 - 501 - 503 - 505	11/18/2008	12:00 AM	Winter Weather	N/A	0	0	OK	OK

**APPENDIX E
HAZARD INVENTORY**

348 NCZ048 - 051>053 - 058>059 - 062 - 501 - 503 - 505	11/21/2008	12:00 AM	Winter Weather	N/A	0	0	0K	0K
349 NCZ053 - 059 - 062>064 - 501 - 503 - 505	12/1/2008	3:00 AM	Winter Weather	N/A	0	0	0K	0K
350 NCZ053 - 062>065 - 501 - 503 - 505	1/19/2009	21:00 PM	Winter Weather	N/A	0	0	0K	0K
351 NCZ035>037 - 056>057 - 068>071 - 502 - 504 - 506	1/20/2009	2:00 AM	Winter Weather	N/A	0	0	0K	0K
353 NCZ502 - 506	3/1/2009	14:00 PM	Winter Weather	N/A	0	0	0K	0K
189 NCZ033>034 - 048>053 - 058>059 - 062>065	2/9/2003	9:00 PM	Winter Weather/mix	N/A	0	0	0	0
191 NCZ033>037 - 049>050 - 053 - 056>057 - 065>072	2/27/2003	12:00 AM	Winter Weather/mix	N/A	0	0	0	0
192 NCZ034>037 - 056>057 - 066>067	3/30/2003	6:00 AM	Winter Weather/mix	N/A	0	0	0	0
194 NCZ034 - 054>055 - 066>067	4/10/2003	9:00 AM	Winter Weather/mix	N/A	0	0	0	0
220 NCZ033>034 - 048>054 - 058>059 - 062>065	11/28/2003	3:00 PM	Winter Weather/mix	N/A	0	0	0	0
221 NCZ034>037 - 054>057 - 066>068 - 071	12/4/2003	6:00 AM	Winter Weather/mix	N/A	0	0	0	0
222 NCZ034 - 054>055	12/18/2003	8:00 PM	Winter Weather/mix	N/A	0	0	0	0
223 NCZ033>037 - 048>055 - 057>058 - 072	1/9/2004	12:00 AM	Winter Weather/mix	N/A	0	0	0	0
226 NCZ034>035 - 048 - 054 - 065>067	2/2/2004	6:00 PM	Winter Weather/mix	N/A	0	0	0	0
227 NCZ034 - 054>055	2/5/2004	6:00 PM	Winter Weather/mix	N/A	0	0	0	0
229 NCZ034>037 - 054>056	2/12/2004	4:00 AM	Winter Weather/mix	N/A	0	0	0	0
230 NCZ034 - 036>037 - 048>050 - 053>057	2/15/2004	12:00 PM	Winter Weather/mix	N/A	0	0	0	0
234 NCZ034 - 048 - 051>055 - 058>059 - 062>066	3/30/2004	12:00 AM	Winter Weather/mix	N/A	0	0	0	0

**APPENDIX E
HAZARD INVENTORY**

251 NCZ034 - 054>055 - 059 - 062>063	12/19/2004	6:00 PM	Winter Weather/mix	N/A	0	0	0	0
252 NCZ033>034 - 055	1/21/2005	8:00 PM	Winter Weather/mix	N/A	0	0	0	0
254 NCZ033>034 - 048>049 - 052 - 062>063 - 065	2/2/2005	8:00 PM	Winter Weather/mix	N/A	0	0	0	0
255 NCZ033>034 - 049>050 - 053>055 - 064>065	2/27/2005	8:00 PM	Winter Weather/mix	N/A	0	0	0	0
257 NCZ033>037 - 048>050 - 052>057 - 059 - 063>068	3/17/2005	2:00 AM	Winter Weather/mix	N/A	0	0	0	0

APPENDIX F
Critical Facilities

**APPENDIX F
CRITICAL FACILITIES**

1. Caldwell County Administrative Offices

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
County Administrative Offices	905 West Avenue	No	Yes	828-757-1300	32,550 sq.ft.	\$921,200 (BV)

2. Caldwell County Court House

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
County Court House	208 Main Street	No	No	828-757-1375	31,750 sq. ft.	\$2,822,500 (BV)

3. Caldwell County Sheriff's Department/Jail

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Sheriff's Dept. Jail/Storage	2351 Morganton Boulevard	Yes	Yes	828-758-2324	57,963 sq. ft	\$3,415,900 (BV)

4. Caldwell County Planning and Building Inspections

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Caldwell Co. Planning	30 Falls Avenue	No	No	828-396-6362	1,500 sq. ft	\$50,500
Caldwell Co. Central Permitting	1966B Morganton Boulevard	No	No	828-757-1343	42,000 sq. ft (Included as part of Health Dept.)	\$3,777,000 (BV)

5. Caldwell County Solid Waste Collection

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Caldwell Co. Landfill	Cheraw Road	No	No	828-754-2855	600 Acres	\$0 (BV)

6. Caldwell County Health Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Caldwell Co. Health Dept.	1966B Morganton Boulevard	No	No	828-757-1217	42,000 sq. ft	\$58,100 (BV)
Caldwell Co. Health Dept. (Satellite Office)	30 Falls Avenue	No	No	828-396-3163	2,500 sq. ft	\$230,300

7. Caldwell County Dept of Social Services

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
D.S.S. Child Support Agency	210 Mulberry Street	No	No	828-757-1401	17,600 sq. ft	\$255,700 (BV)
Caldwell Co. Social Services	1966B Morganton Blvd	No	No	828-757-1180	31,020 sq. ft	\$3,777,000 (BV)

8. Caldwell County Emergency Medical Service

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
EMS-Lenoir Base	616 West Avenue	Yes	No	828-757-1278	5,250 sq. ft	\$293,700 (BV) \$70,000 (Contents)
EMS-Hudson Base	467 Redwood Street	Yes	Yes	828-726-0588	4,609 sq. ft	\$115,000 (BV)
EMS-Granite Falls Base	#4 Park Square	Yes	No	828-396-8920	4,426 sq. ft	\$106,700 (Contents)

9. Caldwell County Public Works

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage/ Tank Capacity	Replacement Value
Public Works Maintenance	1200 Dragstrip Road	No	No	828-728-8125	4,000 sq. ft	\$46,400
Pump Station	Pisgah Church Road	No	No	N/A	200 sq. ft	\$173,700
Water Dept. Office	1160 Dragstrip Road	No	No	828-728-8433	1,288 sq. ft	\$172,600
Gallon Water Tank	Pisgah Church Road	No	No	N/A	200,000 Gallon	\$117,250
Pump Station	Little John Church Road	No	No	N/A	70 sq. ft	\$78,600
Pump Station	Sheely Road	No	No	N/A	70 sq. ft	\$78,400
Water Dept. Storage Pavilion	1160 Dragstrip Road	No	No	N/A	3,840 sq. ft	\$74,900
Public Works Water Dept.	1200 Dragstrip Road	No	No	828-728-5043	1,983 sq. ft	\$18,400
Water Dept. Tool Shed/ Storage	1160 Dragstrip Road	No	No	N/A	240 sq. ft	\$12,200
Public Works Office	30 Falls Avenue	No	No	828-396-1159	900 sq. ft	\$4,444

10. County Volunteer Fire Departments

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Hudson VFD	122 Mount Herman Road	No	Yes (2)	828-728-3584	13,159 sq. ft	\$597,800 (BV)
Sawmills VFD	4068 US HWY 321A	No	Yes	828-396-1567	7,296 sq. ft	\$358,500 (BV)
Gamewell VFD	2806 Morganton Boulevard	No	Yes	828-758-2581	10,902 sq. ft	\$136,000 (BV)
North Catawba VFD	2180 Connelly Springs Road	No	Yes	828-728-9041	9,118 sq. ft	\$303,500 (BV)
Little River VFD	4800 Oak Hill School Road	No	No	828-754-9505	6,016 sq. ft	\$214,100 (BV)
Grace Chapel VFD	4470 Grace Chapel Road	No	Yes	828-396-1702	4,620 sq. ft	\$184,500 (BV)
Kings Creek VFD	3420 Wilkesboro Boulevard	No	No	828-758-2093	5,240 sq. ft	\$167,000 (BV)
Valmead VFD	1757 Main Street NW	No	No	828-754-3567	4,110 sq. ft	\$1,500 (BV)
Yadkin Valley VFD	3089 HWY 268	No	No	828-758-7772	2,520 sq. ft	\$88,300 (BV)
Patterson VFD	2012 Roby Martin Road	No	No	828-758-1855	2,336 sq. ft	\$79,900 (BV)
Collettsville VFD	4325 Collettsville Road	No	Yes	828-758-0987	2,040 sq. ft	\$71,600

11. Caldwell Memorial Hospital

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square footage	Beds	Replacement Value
Caldwell Memorial Hospital	557 Brookdale Drive	Yes	Yes	704-873-5661	276,560 sq. ft	247	\$12,641,500

12. Countywide Evacuation Centers and Emergency Shelters

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
South Caldwell High School	7035 Spartan Drive	No	No	828-396-2188	240,064 sq. ft	\$11,762,200
West Caldwell High School	300 West Caldwell Drive	No	No	828-758-5583	193,809 sq. ft	\$10,512,100
Hibritren High School	550 East Boulevard	No	No	828-758-7376	167,688 sq. ft	\$8,003,200
Hudson Elementary School	200 Roy E. Coffey Drive	No	No	828-728-3712	97,415 sq. ft	\$3,891,100
Hudson Middle School	291 Pine Mountain Road	No	No	828-728-4281	91,246 sq. ft	\$7,299,200
Gamewell Middle School	3210 Gamewell School Rd	No	No	828-754-604	95,759 sq. ft	\$5,615,400
Granite Falls Middle School	90 North Main Street	No	No	828-396-2341	89,131 sq. ft	\$155,500
Gamewell Elementary School	2904 Morganton Boulevard	No	No	828-758-1193	80,605 sq. ft	\$5,615,400
Davenport A+ School	910 College Ave SW	No	No	828-754-6941	76,115 sq. ft	\$2,394,500

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Baton Elementary School	1400 Baton School Road	No	No	828-728-9531	72,446 sq. ft	\$1,240,800
Whitnel Four Seasons	116 Hibriten Drive	No	No	828-728-6423	72,339 sq. ft	\$2,093,800
Granite Falls Elementary School	60 North Highland Ave	No	No	828-396-2222	68,355 sq. ft	\$3,074,900
Dudley Shoals Elementary School	1500 Dudley Shoals Road	No	No	828-396-3457	62,431 sq. ft	\$5,098,500
William Lenoir Middle School	332 Greenhaven Drive NW	No	No	828-758-2500	59,209 sq. ft	\$1,869,500
Collettsville Elementary School	4690 Collettsville School Drive	No	No	828-754-6913	57,592 sq. ft	\$2,174,300
Happy Valley Elementary School	1350 Yadkin Rover Road	No	No	828-754-3496	54,525 sq. ft	\$2,098,000
Kings Creek Accelerated	3680 Wilkesboro Boulevard	No	No	828-754-6039	54,469 sq. ft	\$2,571,500
Sawmills Accelerated	4436 Sawmills School Road	No	No	828-396-2610	49,060 sq. ft	\$1,826,000
Oak Hill Elementary School	4603 Oak Hill School Road	No	No	828-754-6128	45,587 sq. ft	\$11,069,900
Lower Creek Elementary School	630 Lower Creek Drive NE	No	No	828-754-4022	45,494 sq. ft	\$2,145,100
West Lenoir School of Technology	125 Maple Drive NW	No	No	828-754-5161	43,327 sq. ft	\$1,103,000
Valmead Basic	111 Elizabeth Drive NW	No	No	828-754-9612	38,085 sq. ft	\$1,371,600

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Horizons Elementary School	143 Cedar Valley Road	No	No	828-726-5282	26,042 sq. ft	\$667,700
Mulberry Recreation Center (City of Lenoir)	720 Mulberry St, Lenoir, NC	No	No	828 757-2165	27,642 sq. ft.	\$1,000,500
William B. Shuford Recreation Center (Town of Granite Falls)	30 Pinewood Road, Granite Falls, NC	No	No	828-396-1221	13,000 sq. ft	\$791,500
Gateway School	1889 Dudley Shoals Road	No	No	828-396-8373	27,098 sq. ft	\$820,100

13. Lenoir City Hall / City Office Building

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Lenoir Administrative Offices	801 West Avenue	No	No	828-757-2200	15,584 sq. ft.	\$319,100

14. Lenoir Police Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Lenoir PD	1035 West Ave	Yes	Yes	828-757-2100	23,004 sq. ft.	\$1,286,400

15. Lenoir Fire Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility main phone number	Approximate Square footage	Replacement Value
Lenoir FD Station One	602 Harper Avenue	Yes	Yes	828-757-2190	15,908 sq. ft	\$794,500
Lenoir FD Station Two	1927 Norwood Street SW	Yes	Yes	828-	18,898 sq. ft	\$0

16. Lenoir Public Works Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage/Tank- Treatment Capacity	Replacement Value
Lower Creek Waste Water Treatment Plant	1905 Broadland Road	Yes	Yes	828-757-2176	6,000,000 GPD	\$86,000
Lake Rhodhiss Water Treatment Plant	5474 Waterworks Road	Yes	Yes	828-396-1006	12,000,000 GPD	\$244,700
Gunpowder Creek Waste Water Treatment Plant	450 Pine Mountain Road	No	Yes	828-728-8101	2,000,000 GPD	\$4,353,528
Clearwell Storage Tanks (2)	Waterworks Road	No	No	N/A	500,000 & 2,000,000 Gallon	\$1,141,953
Water Storage Tank	Connelly Springs Road	No	No	N/A	3,000,000 Gallon	\$1,040,810
Public Works Department	510 Greer Circle SW	No	No	828-757-2174	24,299 sq. ft.	\$1,015,300
Water Storage Tank	341 Finley Avenue	No	No	N/A	3,000,000 Gallon	\$746,706
Water Storage Tank	Central Street	No	No	N/A	500,000 Gallon	\$661,619

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage/Tank- Treatment Capacity	Replacement Value
Water Storage Tank	Connelly Springs Road	No	No	N/A	1,000,000 Gallon	\$327,216
Bush Town Water Storage Tank	Bush Place NW	No	No	N/A	200,000 Gallon	\$292,227
Indian Hills Water Storage Tank	Indian Grave Road	No	No	N/A	200,000 Gallon	\$292,227
Fire Pumping Station	International Boulevard	No	No	N/A	N/A	\$186,260
Sewer Pump Station	Meadow Wood Street	No	Yes	N/A	N/A	\$141,988
Pump House	1031 Jim Barger Court	No	No	N/A	N/A	\$90,980
Pump Station	Dula Town Road	No	No	N/A	N/A	\$60,866
Town & Country Sewer Pump Station	Town & Country	No	Yes	w/ Telemetry	N/A	\$55,995
Pumping Station	Meadow Creek	No	No	N/A	N/A	\$46,869
Spring Street Sewer Lift Station	Spring Street	No	Yes	w/ Telemetry	N/A	\$33,585
Cypress Street Sewer Lift Station	Cypress Street	No	Yes	w/ Telemetry	N/A	\$33,585
Fir Street Sewer Lift Station	Fir Street	No	Yes	w/ Telemetry	N/A	\$33,585

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage/Tank- Treatment Capacity	Replacement Value
Bush Hill Water Pump Station	Old North Road	No	No	N/A	N/A	\$30,691
Indian Hills Water Pump Station	Indian Grave Road	No	No	N/A	N/A	\$30,691
Quarry Estates Sewer Lift Station	Quarry Estates	No	Yes	w/ Telemetry	N/A	\$26,915
Kincaid Sewer Pump Station	Rocky Road	No	Yes	w/ Telemetry	N/A	\$25,449
Georgetown Estates Sewer Lift Station	Georgetown Lane	No	Yes	w/ Telemetry	N/A	\$21,344
Miller Hill Sewer Lift Station	Miller Hill Road	No	Yes	w/ Telemetry	N/A	\$20,464
Acorn Square Sewer Lift Station	Acorn Square	No	Yes	w/ Telemetry	N/A	\$20,034
Mulberry Sewer Lift Station	Mulberry Street	No	Yes	w/ Telemetry	N/A	\$17,214
Arrowood Sewer Lift Station	Arrowood Street	No	Yes	w/ Telemetry	N/A	\$12,450
Valmead Sewer Lift Station	Valmead Street	No	Yes	w/ Telemetry	N/A	\$12,450
Summit Sewer Lift Station	Summit Street	No	Yes	w/ Telemetry	N/A	\$3,616

17. Hudson Town Hall/Police Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square footage	Replacement Value
Town Hall/Police Department	550 Central Street, Hudson, NC	Yes (Police Only)	No	828-728-8272	6,000 sq. ft.	\$346,500

18. Hudson Public Works Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square footage	Replacement Value
Public Works	113 Matthewson Street, Hudson, NC	No	No	828-728-2826	3,500 sq. ft.	\$128,000

19. Duke Energy Distribution System

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Total Distribution Miles	Number of Customers Served	Replacement Value
Duke Energy	Crump Road, Gamewell	No	No	828-323-8400	725	100,000+	\$200,000,000

20. Blue Ridge Electricity Distribution System

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Total Distribution Miles	Number of Customers Served	Replacement Value
Blue Ridge Energy	1216 Blowing Rock Blvd	No	No	828-754-9071	1460	14,453	\$70,000,000

21. Gamewell Town Hall

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Gamewell Town Hall	2750 Old Morganton Rd	No	No	828-754-1991	800 sq. ft	\$109,200

22. Cajah's Mountain Town Hall

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Cajah's Mountain Town Hall	1800 Connelly Springs Road	No	No	828-728-5053	2,432 sq. ft.	\$177,200

23. Cajah's Mtn. Sanitary Sewer Pump Station

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Cajah's Mountain Sanitary Sewer Pump Station	1340 Brandon Road	No	Yes	828-728-2392 w/telemetry	1,500 sq. ft.	\$150,000

24. Granite Falls Police Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Granite Falls Police Dept.	5 Falls Avenue	Yes	Yes	828-396-3358	4,000 sq. ft.	\$186,000

25. Granite Falls Town Hall

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Granite Falls Town Hall	30 Park Square	No	No	828-396-3131	3,000 sq. ft.	\$80,900

26. Granite Falls Public Works Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage/Tank Capacity	Replacement Value
Lakeside Avenue Water Treatment Plant	100 Lakeside Avenue	Yes	Yes	828-396-3180	5,000 sq. ft.	\$559,400
Meandering Way Sewer Treatment Plant	60 Meandering Way Road	Yes	Yes	828-396-7171	2,460 sq. ft 900,000 GPD	\$43,600
Water Tower	Pinewood Road	No	No	N/A	750,000 gallons	\$973,000
Electric Substation	West Summit Avenue	No	No	N/A	5625 sq. ft. 1.5 MW	\$571,000
Water Tower	Falls Avenue	No	No	N/A	200,000 gallons	\$337,000
Water Tower	School Drive	No	No	N/A	100,000 gallons	\$255,000
Granite Falls Public Works	6 Laurel Street	No	Yes	828-396-2989	3,000 sq. ft.	\$146,500
Sewer Booster Pump	Central Avenue	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	River Bend (1)	No	Yes	w/ Telemetry	N/A	\$135,000

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage/Tank Capacity	Replacement Value
Sewer Booster Pump	River Bend (2)	No	Yes	w/ Telemetry	N/A	\$73,000
Sewer Booster Pump	Laurel Street	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	Duke Street	No	Yes	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	Sewer Plant P/S	No	Yes	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	South Caldwell High School	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	Jordan-Holman Lumber	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	Granite Street/US 321A	No	Yes	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	W. Highland Avenue (1)	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	W. Highland Avenue (2)	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	Sunset Street (1)	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	Sunset Street (2)	No	No	w/ Telemetry	N/A	\$42,000
Sewer Booster Pump	AVI/Plantation Park	No	No	w/ Telemetry	N/A	\$42,000

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage/Tank Capacity	Replacement Value
Sewer Booster Pump	Deerfield Acres	No	No	w/ Telemetry	N/A	\$42,000

27. Granite Falls Fire Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square footage	Replacement Value
Granite Falls Fire Dept.	115 N. Main Street	Yes	Yes	828-396-2379	5,888 sq. ft.	\$27,900

28. Sawmills Town Hall

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square footage	Replacement Value
Sawmills Town Hall	4076 Hwy 321-A	No	Yes	828-396-7903	5,000 sq. ft.	\$298,427

29. Sawmills Public Works Department

Agency/ Facility	Address	Is the facility operated 24/7? (yes/no)	Does the facility have a generator? (yes/no)	Facility Main Phone No.	Approximate Square Footage	Replacement Value
Water Storage Tank	Stamey Rd.	No	No	N/A	250,000 Gallon	\$446,717
Sawmills Public Works Dept.	2989 Roger McCall Dr.	No	Yes	828-396-2300	11,200 sq. ft.	\$169,700
Sewer Pump Station 1	4636 Bert Huffman Dr.	No	Yes w/telemetry	828-396-9365	1,500 sq. ft.	\$125,000
Sewer Pump Station 2	4430 Sawmills School Rd.	No	Yes w/telemetry	828-313-3137	1,000 sq. ft.	\$65,000
Sewer Pump Station 3	Stamey Rd.	No	Yes w/telemetry	N/A	1,200 sq. ft.	\$65,000

APPENDIX G
Areas of Natural Hazard Risk Exposure
(ANHRE)

**APPENDIX G
AREAS OF NATURAL HAZARD RISK EXPOSURE (ANHRE)**

Town of Cajah's Mountain ANHRE

Hazard Identifier	Location	Description	Priority
1CM	Just east of Cottage Grove Road and Town Limits	City of Lenoir sewer pump station - in floodplain area but fitted with riser/back-up generator and security fence	Low
2CM	Between terminus of Cottage Grove Road and Covington Way	Only floodplain area in town - undesirable/unlikely for development over short to medium term	Low

Village of Cedar Rock ANHRE

Hazard Identifier	Location	Description	Priority
1CR	Off Wilkesboro Blvd. And Cedar Rock Estates Drive @ Lower Creek	Small impoundment dam at Lower Creek protects several homes - has been recently replaced by NCDOT	Low/Medium

Town of Gamewell ANHRE

Hazard Identifier	Location	Description	Priority
1G	Along Lower Creek abutting U.S. Hwy 64 / N.C. Hwy 18 near Rocky Road and Hollings Road	Bank erosion along Lower Creek behind several business abutting U.S. Hwy 64/N.C. Hwy 18 - contributes to flooding levels due to sediment build-up	Medium
2G	Along Lower Creek abutting U.S. Hwy 64 / N.C. Hwy 18	Several commercial properties elevated only to the height of the roadway despite proximity to Lower Creek and floodplain	Low/Medium

Town of Granite Falls ANHRE

Hazard Identifier	Location	Description	Priority
1GF	Lake Rhodhiss just west of Duke Power Road in the Town ETJ	Large (250 Unit) development (“Broadwater Landing”) under construction in 2004 - but site design minimizes development in floodplain	Low
2GF	Just east of U.S. Hwy 321 at Gunpowder Creek	Large (250 Unit) development (“River Bend” existing partially in floodplain of Gunpowder Creek - units are elevated to BFE	Low/Medium
3GF	Just east of U.S. Hwy 321 at Gunpowder Creek and just north of 2GF above	Large (300 Unit) development (“Anchor’s Landing” existing partially in floodplain of Gunpowder Creek - units are elevated to BFE	Low/Medium
4GF	Lake Rhodhiss at end of Lakeside Avenue	Town water intake facility on site subject to damage from flooding and/or dam failure	Low
5GF	Lake Rhodhiss just west of Lakeside Avenue	Undeveloped “Crescent” site to be purchased with NC Clean Water Management Trust Fund monies by Town	Low

Town of Hudson ANHRE

Hazard Identifier	Location	Description	Priority
1H	Adjacent to Little Gunpowder Creek between Optimist Avenue and Mt. Herman Road	Area of potential connector road and development adjacent to Little Gunpowder Creek floodplain	Low/ Medium
2H	Adjacent to Little Gunpowder Creek between Walnut Avenue and Mt. Herman Road	Area of potential high density residential development adjacent to Little Gunpowder Creek floodplain	Low/Medium
3H	Off Redwood Court East of Main Street	Expansion of existing park through floodplain area	Low
4H	Just to the East of Pine Mountain Road and the just to the West of Hickory Blvd.	Area of wildland-urban interface with wildfire potential	Low/Medium

Hazard Identifier	Location	Description	Priority
5H	Off Cedar Valley Road on Meadowood Street	Meadowood Pump station owned by the City of Lenoir in floodplain area - adequately protected with riser and back-up power	Low
6H	Mt. Herman Road at Little Gunpowder Creek	Bridge recently replaced by NCDOT, redesigned by reduce historical overtopping by floodwaters	Low
7H	Pine Mountain Road at Little Gunpowder Creek	Bridge recently replaced by NCDOT, redesigned by reduce historical overtopping by floodwaters	Low
8H	Hudson/Cajah Mtn. Road at Creek Crossing	Bridge recently replaced by NCDOT, redesigned by reduce historical overtopping by floodwaters	Low
9H	Cameron Place / Hudson/Cajah Mountain Road at Creek Crossing	Bridge recently replaced by NCDOT, redesigned by reduce historical overtopping by floodwaters	Low
10H	Just East of Hickory Blvd. And Whispering Pine Drive	Large area recently filled in - in and near floodplain area. May exacerbate future flooding nearby.	Low/Medium
11H	Just off of Hickory Blvd.	Chemical Coatings operates a large facility with volatile chemicals	Medium

City of Lenoir ANHRE

Hazard Identifier	Location	Description	Priority
1L	Lenoir Country Club golf course - near intersection of U.S. Hwy 321 and N.C. Hwy 18	Worst, most frequent flooding due to nearby confluence of Zack's Fork and Lower Creek - but site well suited for flooding due to golf course	Low
2L	Off of Jim Barger Court abutting Zack's Fork	Repetitive flood damage to City owned Aquatic Center and Fitness Center of 120 Acre site	Medium
3L	Intersection of Pennton Avenue and Business N.C. Hwy 18	Strip shopping center with frequent but minor parking lot flooding due to localized drainage backup of Zack's Fork under Business N.C 18	Low/Medium

Hazard Identifier	Location	Description	Priority
4L	Plantation Drive off of Pennell Street	Minor and occasional basement and yard flooding at 2 homes	Low
5L	Base of Hibriten Mountain off Starcross Road and Hibriten Mountain Road in City ETJ	Area of high development pressure subject to wildfire risk due to heavy brush/timber cover and “urban-wildland interface”	Medium
6L	“Winnfield” Subdivision off of Powell Road	Approximately 20-unit subdivision in floodplain of Lower Creek, but no historical flooding and units are elevated	Low
7L	N.C. Hwy 18 Bypass just west of U.S. Hwy 321A	Lenoir Mall - low level and occasional parking lot flooding	Low
8L	Just east of the intersection of Business N.C. Hwy 18 and N.C. Hwy 18 Bypass/U.S. Hwy 64	Bernhardt and Broyhill Furniture factories and Bernhardt World Corporate Headquarters - facilities at the confluence of Blair’s Fork and Lower Creek. Current risk is low due to location of structures outside of floodplain and/or to BFE, but future upstream development may endanger facilities in the future.	Medium
9L	N.C. Hwy 18 Bypass near Realty Street	N.C. National Guard Armory in floodplain area - vacated and scheduled to be demolished	Low
10L	N.C. Hwy 18 Bypass near Realty Street	City Motor Vehicle Garage and Motor Pool - vacated and scheduled to be demolished	Low
11L	Harrisburg Drive at Lower Creek	Bridge previously subject to overtopping - but has been replaced by NCDOT to BFE + 1 foot	Low
12L	U.S. Hwy 321 bounded by Southwest Blvd (north), Little Gunpowder Creek (west) and Mount Herman Road (south)	Area subject to medium development pressure, zoned for commercial development and in floodplain of Little Gunpowder Creek	Medium
13L	Plant Road at Lower Creek	City of Lenoir Sewage Treatment Plant - in Lower Creek floodplain but no known flooding problems in the past	Low/Medium

Town of Sawmills ANHRE

Hazard Identifier	Location	Description	Priority
1S	Lake Rhodiss just west of Lacy Road (“Crescent Development”) in Town and in Town ETJ	Large housing development (approximately 350 homes) developed in WS-IV Critical Watershed Area	Low/Medium
2S	Lake Rhodiss between Water Works Road and Lakewood Drive in Town ETJ	68 Acre Recreational Facility abutting Lake Rhodiss - WS-IV Critical Watershed Area w/ potential for flooding	Low/Medium
3S	“Virginia Acres” subdivision, just south of Magnolia Lane in Town ETJ	Basement and yard flooding of approximately 6 homes	Low/Medium
4S	Lake Rhodiss just east of Union Church Road and south of Dry Ponds Road in Town ETJ	Large undeveloped tract with thick timber stands - presents wildfire risk due to “urban-wildland interface”	Medium
5S	Just south of May Road and Troy Road in Town ETJ	Large undeveloped tract with thick timber stands - presents wildfire risk due to “urban-wildland interface”	Medium
6S	Lake Rhodiss between Waterworks Road and Lacy Road in Town ETJ	Large tracts facing significant development pressure - in area of wildfire risk (due to heavy timber coverage) and flooding/dam failure risk due to location on/near Lake Rhodiss	Medium

APPENDIX H

Funding Sources

APPENDIX H FUNDING SOURCES

1. Hazard Mitigation Grant Program (HMGP)

The Federal Disaster Assistance Act (Stafford Act) provides funds authorized by the federal government and made available by FEMA for a cost-share program to states. The HMGP provides 75% of the funds while the states provide 25% of the funds for mitigation measures through the post-disaster planning process. The Division of Emergency Management administers the program in this state. The state share may be met with cash or in-kind services. The program is available only for areas affected by a Presidentially-declared disaster.

Contact: NCDDEM, 919/715-8000, <http://www.dem.dcc.state.nc.us>

2. Adopt-a-Trail Program

Through the North Carolina Department of Environment and Natural Resources, this program provides grant funding for trail planning, construction, maintenance, and administration.

Contact: NCDENR, 919/846-9991, <http://www.enr.state.nc.us>

3. Assistance to Firefighters Grant Program

Through the Federal Emergency Management Agency, this program provides four grant categories to assist state, local, and tribal Fire Departments with funding necessary for training, equipment purchase, vehicle acquisition, public awareness, code enforcement, arson prevention, and the like.

Contact: FEMA, 866/274-0960, <http://www.usfa.fema.gov/grants>

4. Community Development Block Grant (CDBG) Disaster Recovery Initiative

The CDBG program provides grants to communities for post-disaster hazard mitigation and recovery following a presidential declaration of a Major Disaster of Emergency. Funds can be used for activities such as acquisition, rehabilitation, or reconstruction of damaged properties and facilities and redevelopment of disaster-affected areas. Funds may also be used for emergency response activities, such as debris clearance and demolition and extraordinary increases in the level of necessary public services. HUD provides funds for the CDBG program, and with the help of the Division of Community Assistance administers the program in North Carolina.

5. Clean Water Management Trust Fund

An agency of the North Carolina Department of Environment and Natural Resources (NCDENR), the Clean Water Management Trust Fund (CWMTF) provides grants for enhancement and restoration of degraded waters. In addition, funding is provided for development of buffers and greenways near rivers for environmental, educational, and recreational needs. Contact: CWMTF, 252/830-3222, <http://www.cwmtf.net>

6. Community Facilities Loans

The US Department of Agriculture (USDA), Rural Housing Service (RHS) provides funding for construction of community facilities for public use. Contact: USDA, RHS Williamston Area Office, 252/792-7603, <http://www.rurdev.usda.gov/rhs/index.html>

7. Disaster Preparedness Improvement Grant (DPIG)

This grant provides federal matching funds for communities to develop hazard mitigation plans, expand existing plans, update disaster preparation plans, and to prepare the administrative plans required to qualify for Hazard Mitigation Grant Program grants. Funds for the DPIG are provided by FEMA and the Division of Emergency Management administers the program in North Carolina. Contact: NCDEM, 919/715-8000, <http://www.dem.dcc.state.nc.us>

8. Flood Insurance

The Federal Emergency Management Agency, Federal Insurance Administration provides the opportunity to purchase flood insurance under the Emergency Program of the National Flood Insurance Program (NFIP).

Contact: NFIP, 888/CALL-FLOOD, ext. 445, <http://www.fema.gov/nfip>

9. Flood Mitigation Assistance Program (FMAP)

This program provides grants for cost-effective measures to reduce or eliminate the long-term risk of flood damage to the built environment and real property. The program's main goal is to reduce repetitive losses to the National Flood Insurance Program. The FMAP is available to eligible communities every year, not just after a Presidentially-declared disaster. Funds for the FMAP are provided by FEMA and the Division of Emergency Management administers the program in North Carolina. Contact: NCDEM, 919/715-8000, <http://www.dem.dcc.state.nc.us>

10. North Carolina Wetlands Restoration Program

This program, through the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Quality, provides in-kind services for the restoration of wetlands and for increased effectiveness of wetland mitigation efforts. Contact: NCDENR, Division of Water Quality, 919/733-5083, <http://h2o.ehn.state.nc.us/wrp>

11. Parks and Recreation Trust Fund (PARTF)

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

Contact: NCDENR, 919/715-2662, <http://www.enr.state.nc.us/>

12. Physical Disaster Loans

The Small Business Administration (SBA) offers loans to victims of declared physical disasters for uninsured losses. The loan limit on these funds may be increased by twenty percent to provide for mitigation measures. Contact: SBA, 800/827-5722, <http://www.sba.gov/>

13. Property Improvement Loan Insurance

The US Department of Housing and Urban Development (HUD) insures lenders against loss on loans for alterations, repairs and improvements to existing structures and new construction of nonresidential structures. Contact: HUD, 202/708-1112, <http://www.hud.gov/>

14. Public Assistance Program (PA)

The Public Assistance provides federal aid to communities to help save lives and property in the immediate aftermath of a disaster and to help rebuild damaged facilities. Grants cover eligible costs associated with the repair, replacement, and restoration of facilities owned by state and local governments and nonprofit organizations. The Public Assistance program is administered by FEMA. Contact: FEMA, <http://www.fema.gov/r-n-r/pa/index.htm>

15. Resource Conservation and Development

The US Department of Agriculture, Natural Resources Conservation Service (NRCS) provides technical and limited financial assistance to communities for resource conservation projects including land conservation, water management, and environmental enhancement. Contact: NRCS, <http://www.nrcs.usda.gov>

16. River Basin Surveys and Investigations

The US Department of Agriculture, Natural Resources Conservation Service provides technical assistance to local agencies for planning activities to solve problems related to the river basin, including wetland preservation. Contact: NRCS, <http://www.nrcs.usda.gov>

17. Small Business Administration Disaster Assistance Program

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

18. Snagging and Clearing for Flood Control

The Office of the Chief of Engineers, Department of the Army, Department of Defense provides this service in order to reduce flood control. Contact: <http://www.usace.army.mil>

19. Soil and Water Conservation

The US Department of Agriculture, Natural Resources Conservation Service provides this in-kind service in order to provide for the conservation, development and productive use of the nation's soil, water, and related resources. Contact: USDA, NRCS, <http://www.nrcs.usda.gov>

20. Urban Park and Recreation Recovery Program

This program of the Department of the Interior, National Park Service (NPS) provides grants for local governments for improvements in park system management and recreational opportunities. Contact: NPS, 202/565-1200, <http://www.cr.nps.gov/index.htm>

21. Watershed Protection and Flood Prevention Loans

This US Department of Agriculture, Rural Utilities Services (RUS) program provides loans to local organizations for the local share of costs for watershed improvement. Funding includes support for drainage, flood prevention and sedimentation control.

Contact: RUS, <http://www.rurdev.usda.gov/rus/index.html>

22. Watershed Surveys and Planning

The US Department of Agriculture, Natural Resources Conservation Service provides technical and financial assistance for sharing costs of watershed protection measures, including flood prevention, sedimentation control and recreation. Contact: NRCS, <http://www.nrcs.usda.gov>



FEMA

December 6, 2010

Mr. Doug Hoell, Director
North Carolina Division of Emergency Management
4713 Mail Service Center
Raleigh, North Carolina 27699

Attention: Mr. Chris Crew

Reference: Multi-Jurisdictional Hazard Mitigation Plan: Caldwell County, North Carolina

Dear Mr. Hoell:

We are pleased to inform you that the Caldwell County Hazard Mitigation Multi-jurisdictional Plan is in compliance with the federal hazard mitigation planning standards resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years, to December 6, 2015.

This plan approval extends to the following participating jurisdiction that provided a copy of their resolution adopting the plan:

- Caldwell County, Uninc.

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

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Severe Repetitive Loss (SRL)
- Flood Mitigation Assistance (FMA)

A fifth program, Repetitive Flood Claims (RFC), does not have a requirement for a local Hazard Mitigation Plan. National Flood Insurance Program (NFIP) participation is required for some programs.

The Towns of Cahah's Mountain, Gamewell, Granite Falls, Hudson, Rhodhiss and Sawmills, the Village of Cedar Rock and the City of Lenoir also participated in the Caldwell County PDM Plan. When those jurisdictions have submitted their supporting documentation of adoption of the Plan, they will be added as eligible applicants for the above referenced grant programs.

We commend the participants in the Caldwell County plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted.

For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved

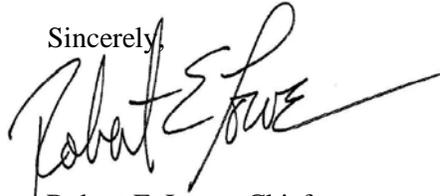
for FEMA funding under any of the aforementioned programs. In addition, please be aware that if any of the approved jurisdictions participating in this plan are placed on probation or are suspended from the National Flood Insurance Program, they may be ineligible for certain types of federal funding.

We strongly encourage each Community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each Community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the plan is amended or revised, it must be resubmitted through the State as a “plan update” and is subject to a formal review and approval process by our office. If the plan is not updated prior to the required five (5) year update, please ensure that the draft update is submitted at least six (6) months prior to expiration of this plan.

The State and the participants in the Caldwell County plan should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or Caldwell County have any questions or need any additional information please do not hesitate to contact MaryMargaret Jackson, of the Hazard Mitigation Assistance Branch, at (770) 220-5234, or Linda L. Byers of my staff at (770)-220-5498.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert E. Lowe", with a long horizontal flourish extending to the right.

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division



FEMA

July 19, 2011

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4713 Mail Service Center
Raleigh, North Carolina 27699

Reference: Caldwell County Hazard Mitigation Plan Update

Dear Mr. Crew:

This is a follow-up to our previous correspondence of December 6, 2010, in which we approved the Caldwell County Local Hazard Mitigation Plan Update and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolutions for inclusion within this plan and subsequently have approved the communities under the approved Caldwell County Local Hazard Mitigation Plan Update:

- Town of Cahah's Mountain
- Village of Cedar Rock
- Town of Gamewell
- Town of Granite Falls
- Town of Hudson
- Town of Rhodhiss
- Town of Sawmills

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

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Severe Repetitive Loss (SRL)
- Flood Mitigation Assistance (FMA)

A fifth program, Repetitive Flood Claims (RFC), does not have a requirement for a local Hazard Mitigation Plan. National Flood Insurance Program (NFIP) participation is required for some programs.

We commend Caldwell County Local Hazard Mitigation Plan Update for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs. In addition, please be aware that if any of the approved jurisdictions participating in this plan are placed on probation or are suspended from the National Flood Insurance Program, they may be ineligible for certain types of federal funding.

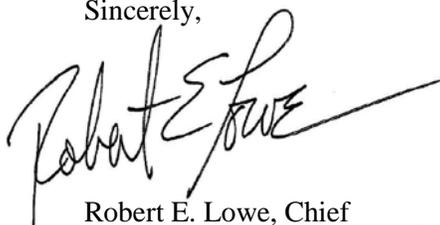
We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years.

We also encourage each community to conduct a plan update process within one year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, it must be resubmitted through the State as a “plan update” and is subject to a formal review and approval process by our office. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or Caldwell County have any further questions or need any additional information please do not hesitate to contact Victor Geer, of the Hazard Mitigation Assistance Branch, at (770) 220-5659, or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert E. Lowe". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division



FEMA

October 7, 2011

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4713 Mail Service Center
Raleigh, North Carolina 27699

Reference: Caldwell County Hazard Mitigation Plan Update

Dear Mr. Crew:

This is a follow-up to our previous correspondence of December 6, 2010, in which we approved the Caldwell County Multi-Jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved the community under the approved Caldwell County Multi-Jurisdictional Hazard Mitigation Plan:

- City of Lenoir

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

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- Pre-Disaster Mitigation (PDM)
- Severe Repetitive Loss (SRL)
- Flood Mitigation Assistance (FMA)

A fifth program, Repetitive Flood Claims (RFC), does not have a requirement for a local Hazard Mitigation Plan. National Flood Insurance Program (NFIP) participation is required for some programs.

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

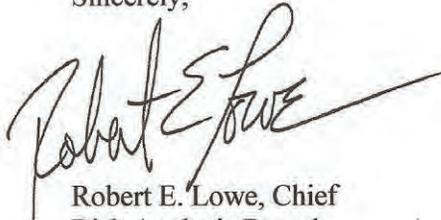
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