

MITIGATION ACTION PLANS

Mitigation Action Plans

The mitigation actions proposed by each of Catawba County's local governing bodies are listed in nine (9) individual Mitigation Action Plans (MAPs) on the pages that follow. Also included with this section is a separate MAP for the Catawba Valley Chapter of the American Red Cross (serving Alexander and Catawba Counties). Each MAP has been designed to address the countywide mitigation goals of this Hazard Mitigation Plan, in addition to the particular goals and objectives of each individual jurisdiction. They will be maintained on a regular basis according to the plan maintenance procedures established for the Catawba County Multi-jurisdictional Hazard Mitigation Plan (See Section 10: *Plan Maintenance Procedures*). This section also includes a **status update** for each of the mitigation actions proposed in 2004, noting whether the action has been completed, deferred or deleted from the previously approved (2004) plan.

44 CFR Requirement
44 CFR Part 201.6(c)(3)(iii):
The mitigation strategy shall include an action plan describing how the actions identified in paragraph (c)(2)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction.

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Jurisdiction	Number of Mitigation Actions (2004)	Number of Mitigation Actions (2009)
Catawba County	16	18
Brookford, Town of	3	6
Catawba, Town of	12	9
Claremont, City of	10	8
Conover, City of	10	7
Hickory, City of	7	10
Long View, Town of	5	8
Maiden, Town of	15	10
Newton, City of	10	9
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44 CFR Requirement
44 CFR Part 201.6(c)(3)(iv):
For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit for the plan.

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CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba County

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High		✓	
	Moderate			
	Limited			

2009 Mitigation Actions

Catawba County Mitigation Action 1	Preserve large, intact forest land through the acquisition and/or dedication of park land through the County's Unified Development Ordinance requirements. As part of the Park's Department forestry management program, non-native pine plantation stands in the park property will be selectively harvested to allow for the successional return of native forest vegetation. This action is aimed at reducing greenhouse gases through carbon sequestration and thereby also helping to reduce the potential of increased frequency and severity of natural hazards (particularity drought and wildfire, but many others identified in this Plan as well).
Category:	Natural Resource Protection
Hazard(s) Addressed:	Designed to address Climate Change and its long-term potential to increase the frequency and severity of natural hazards including Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms and Dam/Levee Failure.
Lead Agency/Department Responsible:	Planning, Parks & Development
Estimated Cost:	Staff time to be determined
Potential Funding Sources:	General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	High

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Catawba County Mitigation Action 2	Conduct a carbon footprint analysis for the County's facilities and evaluate current policies to identify ways to reduce greenhouse gases. Implement priority strategies identified in the study, which may include the production of biodiesel fuel at the County's EcoComplex, renewable energy sources such as windmills, reduction of particulate matter and ozone through recommendations of the Early Action Compact and the development of an energy plan which may include purchasing policies that address energy reduction strategies and contractor policies for equipment emissions.
Category:	Prevention
Hazard(s) Addressed:	Designed to address Climate Change and its long-term potential to increase the frequency and severity of natural hazards including Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms and Dam/Levee Failure.
Lead Agency/Department Responsible:	Multi-departmental through Green Initiatives Team, especially Public Health and Utilities & Engineering
Estimated Cost:	Staff time with implementation to be determined
Potential Funding Sources:	General Fund and Energy Department grants
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High

Catawba County Mitigation Action 3	Develop a farmland preservation plan which will identify tools and techniques to preserve sensitive farmland, and particularly those areas prone to flooding.
Category:	Prevention and Natural Resource Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning, Parks & Development and Cooperative Extension through the Agricultural Advisory Board
Estimated Cost:	To be determined
Potential Funding Sources:	ADFP grant and General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High

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Catawba County Mitigation Action 4	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the specific actions. This includes evaluating the Community Rating System (CRS) and identifying strategies that can be implemented to reduce flood potential and in turn allow for a reduction in flood insurance rates for citizens of the County. These strategies may include maintaining digital FEMA elevation certificates, training for plan reviewers and building inspectors, sponsoring a training workshop for surveyors and pursuing CFM certification for a staff person. Supplies of FEMA and NFIP materials will also be made available to the public in various locations throughout the County such as libraries and on the County's web site.
Category:	Prevention and Public Education/Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning, Parks & Development and Emergency Services
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund and Grants
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High

Catawba County Mitigation Action 5	Develop a countywide greenway master plan to provide an interconnected trail network which preserves sensitive land along river systems. These trails can become part of the Carolina Thread Trail, Duke Energy Relicensing facilities and the Lake Norman Bicycle Route.
Category:	Natural Resource Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning, Parks & Development
Estimated Cost:	To be determined
Potential Funding Sources:	Carolina Thread Trail, PARTF, CWMTF and other grant sources
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High

Catawba County Mitigation Action 6	Provide education to citizens about tree-trimming techniques to reduce the potential for power outages due to downed tree limbs
Category:	Public Education/Awareness
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Winter Storms
Lead Agency/Department Responsible:	Cooperative Extension through local power companies
Estimated Cost:	Staff time
Potential Funding Sources:	General fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	High

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Catawba County Mitigation Action 7	Coordinate with American Red Cross to install pre-wired connections (“Quick Connects”) to use portable generators at targeted critical public facilities and those designed to serve as shelters for disaster survivors. Evaluate other locations with existing wiring which can accommodate generators, for example, schools, churches, recreation centers.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Emergency Services and American Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-Disaster Mitigation program.
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	High

Catawba County Mitigation Action 8	Provide outreach education to property owners along flood-prone areas, such as Carpenters Cove, about floodplain regulations and evacuation plans. This includes direct mailings to owners of repetitive loss properties (as identified by FEMA – see Section 6) about available mitigation grant programs. Also provide education opportunities for school-age children, such as the Red Cross “Masters of Disaster” education program.
Category:	Emergency Services and Public Education/Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Emergency Services, Red Cross and Planning, Parks & Development
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	High

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Catawba County Mitigation Action 9	Promote a standard hook up for emergency generators such that any portable generator can be simply connected to it for supply of power to vital circuits in homes and/or public buildings. Priority locations are hospitals, nursing homes, schools and government buildings.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Emergency Services with Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-Disaster Mitigation program.
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High-Moderate

Catawba County Mitigation Action 10	Identify areas for emergency access to and from public properties, such as Bakers Mountain Park, Riverbend Park and the Wildlife Club (off Lynn Mountain Road). These areas will be maintained for access by emergency personnel in the event of wildfires or other events. This includes working with key property owners adjoining the subject properties, developing cooperative agreements and clearing/maintaining new or existing fire roads. Emphasis will be placed on securing access ways at each of these properties. Gating, ditching, signage and fencing is necessary in high risk areas that are prone to vandalism that may result in forest fires. The first phase will be mapping of appropriate locations and training with EMS in the County's parks.
Category:	Natural Resource Protection and Public Education/Awareness
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Emergency Services, Forest Service and Park Personnel
Estimated Cost:	To be determined
Potential Funding Sources:	Grants or community-service projects with organized groups
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate

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Catawba County Mitigation Action 11	Evaluate the FIREWISE communities program and its application to develop communities and homes which are designed, built and maintained to withstand wildfires.
Category:	Public Education/Awareness
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Emergency Services. Fire Depts. and Planning, Parks & Development
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	2-3 years
Priority (High, Moderate, Low):	Moderate

Catawba County Mitigation Action 12	Ensure that manufactured home parks have perimeter vegetative buffers to protect manufactured homes from high wind events.
Category:	Prevention
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes
Lead Agency/Department Responsible:	Planning, Parks & Development
Estimated Cost:	Requirement of ordinance
Potential Funding Sources:	Private
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	Moderate

Catawba County Mitigation Action 13	Continue the work of the established multi-jurisdictional Stormwater Committee to prioritize stormwater issues/projects within the area. This committee will meet regularly to develop action plans and establish priorities for addressing stormwater issues which would minimize the impacts of flooding throughout the County. Examples of efforts would include coordination of stormwater review of subdivisions, public education on clearing stormwater drains and culverts, a stormwater plan to address flooding episodes at Carpenters Cove, and sharing of information with NCDOT regarding debris accumulation at bridge abutments, culverts, etc.
Category:	Prevention, Natural Resource Protection and Public Education/Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Multi-jurisdictional with staff of Engineering and Planning Departments
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate

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Catawba County Mitigation Action 14	Coordinate with Social Services to provide back-up power at family care, nursing and adult care homes within the County.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Emergency Services and Social Services
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-Disaster Mitigation program.
Implementation Schedule:	2-3 years
Priority (High, Moderate, Low):	Moderate

Catawba County Mitigation Action 15	Evaluate ordinances and policies to develop ways to address ways to mitigate for drought events. This may include implementation of a Low Inflow Protocol along the Catawba River and encouraging drought resistant vegetation and LEED standards for new development.
Category:	Prevention
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Planning, Parks & Development
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	Moderate

Catawba County Mitigation Action 16	Continue and expand the network of public-private partners, such as the Local Emergency Planning Committee (LEPC), to include other organizations like the Contingency Planning Association of the Carolinas (CPAC) to engage the business community in hazard mitigation activities.
Category:	Public Education/Awareness
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Emergency Services
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	Moderate

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Catawba County Mitigation Action 17	Develop a landscape manual which encourages the use of native trees and vegetation which are storm and drought resistant. This manual will be available to the development community as a tool to meet the landscaping requirements of the Unified Development Ordinance. The general public will also be encouraged to use this manual when landscaping individual home sites.
Category:	Public Education/Awareness
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, and Winter Storms
Lead Agency/Department Responsible:	Planning, Parks & Development and Cooperative Extension
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-3years
Priority (High, Moderate, Low):	Low

Catawba County Mitigation Action 18	Provide outreach education to manufactured home park owners and residents on the need for developing an evacuation plan during imminent hazard threats.
Category:	Emergency Services and Public Education/Awareness
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Emergency Services
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Low

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Status Update on 2004 Mitigation Actions

Catawba County Mitigation Action 1	Explore the concept of transfer of development rights and its application to preserving land susceptible to natural hazards. Included in this evaluation is a determination whether legislative authority is required or the County can adopt an ordinance by-right.
Category:	Prevention
Hazard(s) Addressed:	Flood and Wildfire
Lead Agency/Department Responsible:	Planning and Community Development
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High (as identified by the Small Area Plans)
2009 Status:	Deleted. It has been determined that legislative authority must be obtained in order to implement the transfer of development rights program into the Unified Development Ordinance. At this time, there is not a high demand for this provision; therefore, it will be evaluated during a future annual legislative review.

Catawba County Mitigation Action 2	Coordinate with Red Cross to have shelter locations provided with suitable back-up generator provisions. Goal is to have at least 50% of the shelter sites provided with back-up generators within one year.
Category:	Emergency Services
Hazard(s) Addressed:	Multi-hazard
Lead Agency/Department Responsible:	Emergency Services and Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.
Implementation Schedule:	1-3 years
Priority (High, Moderate, Low):	High
2009 Status:	Partially completed. A back-up generator has been installed at the Newton Recreation Center and two local churches are working on the purchase and installation of back-up generators at their locations. Funding availability has been an obstacle in the installation of additional back-up generators at other shelter locations throughout the County.

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Catawba County Mitigation Action 3	Conduct a disaster drill for a breach of the Catawba River dams, with emphasis on Oxford Dam. This includes providing information to the public on emergency preparedness. Drill to be coordinated with Duke Energy.
Category:	Emergency Services and Public Education/Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Emergency Services
Estimated Cost:	To be determined
Potential Funding Sources:	General Fund (staff time); private sector (Duke Energy); Department of Homeland Security – Emergency Management Performance Grants.
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2009 Status:	Completed. A tabletop and functional drill was conducted on August 10, 2006 which simulated the breach of the Lake Rhodhiss dam, which caused a secondary failure to Oxford dam. The exercise was a multi-jurisdictional event involving Catawba, Burke, Alexander and Caldwell counties along with affected municipalities. Duke Energy was also a party to the exercise. The evaluation of the exercise indicated that it was a successfully drill; however, it pointed out that the Emergency Operations Center needs to be at one central location in the County.

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Catawba County Mitigation Action 4	Purchase an early warning system where property owners are automatically notified of a pending event. Example would be the "Intrado" system where coordinates are provided to the system and property owners are automatically notified through an outbound calling system.
Category:	Emergency Services
Hazard(s) Addressed:	Multi-hazard
Lead Agency/Department Responsible:	Emergency Services
Estimated Cost:	Currently being researched (monthly service fee)
Potential Funding Sources:	General Fund; Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.
Implementation Schedule:	1 year
Priority (High, Moderate, Low):	High
2009 Status:	Completed. A community alert system was acquired in 2006 and went into operation in July 2007. The alert system allows the public to be contacted directly in case of a large-scale emergency. Multiple opportunities exist for notification, such as e-mail, text messaging, cell and/or a home phone in order to provide citizens updated about emergency conditions, what to do and where to go. The alert system was funded by Department of Homeland Security funds and is administered by Emergency Services.

Catawba County Mitigation Action 5	Install back-up generator along with ancillary facilities (transfer switches, hard-wiring, etc.) at the Government Center. The Government Center is a critical facility which serves as a back-up facility for the Emergency Operations Center and is the location for vital emergency operations: computer links, file server, plans, etc.
Category:	Emergency Services
Hazard(s) Addressed:	Multi-hazard
Lead Agency/Department Responsible:	Emergency Services
Estimated Cost:	\$65,000
Potential Funding Sources:	General fund; Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.
Implementation Schedule:	1 year
Priority (High, Moderate, Low):	High
2009 Status:	Completed. A back-up generator system, along with its ancillary facilities, was installed at the Government Center on August 8, 2004. Funding for the project came from the County's General Fund.

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Catawba County Mitigation Action 6	Install an “I-flow” system for monitoring of flood levels on high priority creeks/lakes in the County, such as Carpenters Cove along Lookout Shoals Lake. This will be used for notifying emergency personnel to initiate warnings or evacuation procedures.
Category:	Emergency Services
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Emergency Services
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2009 Status:	Deleted due to lack of funding support. The State of North Carolina, which has previously installed I-flow systems in the region, is no longer supporting the expansion of the I-flow system. This has become a low priority since other methods are available to monitor stream levels such as Duke Energy’s lake level monitoring and stream gauge system.

Catawba County Mitigation Action 7	Create a special mountain protection zoning district for Bakers Mountain and Anderson Mountain which will require low-density lot sizes. Standards will also address fire breaks, preservation of trees around homes and other issues of urban/wildland interface.
Category:	Prevention
Hazard(s) Addressed:	Wildfires
Lead Agency/Department Responsible:	Planning & Community Development
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High (as determined in Small Area Plans and potential threat to development)
2009 Status:	Completed. The County’s Unified Development Ordinance, adopted on February 5, 2007, included a Mountain Protection Overlay (MP-O) district which was created to protect the sensitive characteristics of Bakers and Anderson Mountains. The average density allowed in the MP-O is one unit per 2 acres, which is the lowest density development required in the County. The ordinance also requires the preservation of significant trees, good grading practices and the use of fire “smart” vegetation species and techniques to minimize the vulnerability of a structure to fire.

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Catawba County Mitigation Action 8	Require new residential developments to provide a minimum percentage of open space with emphasis on the retention of natural buffers along creeks, streams and lakes. Also require tree preservation and/or plantings for residential and non-residential development to reduce the impacts of stormwater runoff.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning & Community Development
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High (as recommended by Small Area Plans)
2009 Status:	Completed. The County's Unified Development Ordinance, adopted on February 5, 2007, included a requirement for all major subdivisions to either provide 2500 square feet of open space per lot or a fee-in lieu of on-site open space. If on-site open space is provided, at least 75% must be in "secondary" open space which includes steep land, floodplain areas, wetlands, etc. An option is also available to develop under the "cluster" subdivision provision where 25% of the development is retained as permanent open space which can include floodplain, wetland and other sensitive lands that are permanently preserved. The UDO further prohibits clear-cutting in residential subdivisions and where significant trees do not exist, the UDO requires the planting of street trees along new subdivision roads. Developers of non-residential uses must plant a perimeter buffer when adjoining residential uses and install parking perimeter and interior landscaping with a variety of plantings. The interior parking landscape islands serve to reduce the impacts of stormwater runoff.

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Catawba County Mitigation Action 9	Promote a standard hook up for emergency generators such that any portable generator can be simply connected to it for supply of power to vital circuits in homes and/or public buildings. Priority locations are hospitals, nursing homes, schools and government buildings.
Category:	Emergency Services
Hazard(s) Addressed:	Multi-hazard
Lead Agency/Department Responsible:	Emergency Services with Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High-Moderate
2009 Status:	Partially completed. A standard hook up for emergency generators has been installed at Newton-Conover High School. Also, as of early 2005, all the Emergency Services bases in the County have been provided with back-up generator systems. Other sites have not had systems installed due to limited funding opportunities.

Catawba County Mitigation Action 10	Identify areas for alternative safe access to and from public properties, such as Bakers Mountain Park, Riverbend Park and the Wildlife Club (off Lynn Mountain Road). These areas will be maintained for access by emergency personnel in the event of wildfires or other events. This includes working with key property owners adjoining the subject properties, developing cooperative agreements and clearing/maintaining new or existing fire roads.
Category:	Natural Resource Protection
Hazard(s) Addressed:	Wildfires
Lead Agency/Department Responsible:	Emergency Services, Forest Service and Park Personnel
Estimated Cost:	To be determined
Potential Funding Sources:	Grants or community-service projects with organized groups
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Partially completed. Access points and an access management plan have been developed for Riverbend Park. Natural fire breaks also exist to minimize the spread of fire throughout the park. Safety plans have been prepared for Riverbend Park in the event of flooding or high wind warnings. Due to topographical constraints there are limited opportunities for access points to Bakers Mountain Park. The Forest Service will further evaluate locations and make contact with appropriate property owners.

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Catawba County Mitigation Action 11	Provide education to the public during high fire hazard times and prior to peak seasons. This includes public service announcements on the Government Channel, radio spots, and a government sponsored-clean up date. Emphasis will also be placed on providing information to the public at the County parks to be aware of fire hazards as they use the facilities.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Emergency Services, Forest Service and Parks Division
Estimated Cost:	To be determined
Potential Funding Sources:	Staff time and grant for clean-up date
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. As burning bans have been put into effect, public announcements through press releases radio and the County's web site have been made. In addition, local restrictions were placed on burning within 100 feet of residences and in some cases, burning permits were cancelled. General safety guidelines are provided to park patrons advising them of fire hazards within the park.

Catawba County Mitigation Action 12	Evaluate the FIREWISE communities program and its application to develop communities and homes which are designed, built and maintained to withstand wildfires.
Category:	Prevention
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Emergency Services, Fire Depts. and Planning/Zoning
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	2-3 years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Partially completed. The County's Unified Development Ordinance, adopted on February 5, 2007, included a Mountain Protection Overlay (MP-O) district which was created to protect the sensitive characteristics of Bakers and Anderson Mountains. The ordinance encourages the use of fire "smart" vegetation species and techniques to minimize the vulnerability of a structure to fire. The Forest Service will further evaluate communities which could benefit from the FIREWISE program.

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Catawba County Mitigation Action 13	Establish an on-going multi-jurisdictional Stormwater Committee to prioritize stormwater issues/projects within the area. Representatives may include Emergency Services, Fire, Rescue and Planning from each jurisdiction, NCDOT, Cooperative Extension, NCEM and NCDENR. This committee would meet regularly to develop an action plan and establish priorities for addressing stormwater issues which would minimize the impacts of flooding throughout the County. Examples of efforts would include coordination of stormwater review of subdivisions, public education on clearing stormwater drains and culverts, a stormwater plan to address flooding episodes at Carpenters Cove, and sharing of information with NCDOT regarding debris accumulation at bridge abutments, culverts, etc.
Category:	Prevention and Public Education/Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Coordinated between Emergency Services and Planning & Community Development
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	Moderate
2009 Status:	<p>Partially completed. A Stormwater Working Group was established which includes members from three counties and the major cities within those counties. The Group was initially formed to review the EPA's Stormwater Rules but it also has sponsored public education workshops, including Stormwater 101 and Low Impact Development techniques. In addition to this group, a Unifour Public Works/Utilities group has been meeting quarterly to discuss various public works issues and provide collaborative sharing. Both of these groups can be expanded upon to include discussions of flooding episodes and best management practices. As specific flooding episodes occur along State-maintained roads, contact is made with NCDOT to inform them of the situation. New flood maps were received and went into effect in September 2007 which more accurately depict flood hazards within the County. The Carpenters Cover area has been highlighted and the Permit Center is knowledgeable of the need for special permitting activities within the area.</p>

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba County Mitigation Action 14	Coordinate with Social Services to provide back-up power at family care and adult care homes within the County.
Category:	Emergency Services
Hazard(s) Addressed:	Extreme heat/cold and Multi-Hazard
Lead Agency/Department Responsible:	Emergency Services and Social Services
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.
Implementation Schedule:	2-3 years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Partially completed. Larger adult care homes in the County have back-up power systems provided by the operators of the homes. The remaining adult homes and the family care homes have not been provided with back-up systems due to the lack of funding.

Catawba County Mitigation Action 15	Coordinate with local power companies (Duke and REA) to develop publicly-acceptable tree-trimming policies. Include public education for property owners on the benefits of proper tree-trimming around power lines and clearing of debris around homes.
Category:	Prevention
Hazard(s) Addressed:	Winter storms and High Winds
Lead Agency/Department Responsible:	Emergency Services and Planning
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	2 years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. The power companies have established their own tree-trimming policies. Attempts will be made to coordinate with the companies in providing public information on proper techniques.

Catawba County Mitigation Action 16	Evaluate the provision of rapid access facilities for tenants of manufactured home parks to provide safe shelter during hazard events. This includes exploring funding options for constructing facilities within the area of the park or potentially on-site.
Category:	Emergency Services
Hazard(s) Addressed:	Multi-hazard, especially tornadic events
Lead Agency/Department Responsible:	Emergency Services
Estimated Cost:	Staff time
Potential Funding Sources:	General Fund
Implementation Schedule:	3-5 years
Priority (High, Moderate, Low):	Low
2009 Status:	Deferred. With limited funding resources and being a low priority item, this action has not been completed.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Town of Brookford

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High			
	Moderate	✓		
	Limited			

2009 Mitigation Actions

Brookford Mitigation Action 1	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Evaluate and consider the adoption of “higher standards” that are proven to reduce flood damage (including additional freeboard, setbacks, limitations on lower-level enclosure size, and the prohibition on use of fill). b) Obtain FEMA’s Substantial Damage Estimator and attend training to be prepared to use it when damage occurs; develop mutual aid agreements with other jurisdictions to augment local inspection personnel after major disasters.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Administration
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Brookford Mitigation Action 2	Develop mutual aid agreements with other jurisdictions to augment local inspection personnel after major disasters.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Administration
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	Moderate

Brookford Mitigation Action 3	Prepare a Local Evacuation Plan to ensure that safety of Town residents in advance of anticipated hazard events, particularly wildfires and flooding.
Category:	Emergency Services
Hazard(s) Addressed:	Wildfire, Flood
Lead Agency/Department Responsible:	Police
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	Moderate

Brookford Mitigation Action 4	Enhance local citizen disaster preparedness through continuous outreach and education efforts in coordination with Catawba County, the American Red Cross and other support organizations.
Category:	Preparedness
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Administration, Police
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	2-4 years
Priority (High, Moderate, Low):	High

Brookford Mitigation Action 5	Continue the routine inspection of the Town's storm drain system.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works Department
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Continuous implementation (as needed)
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Brookford Mitigation Action 6	Continue routinely pruning and clearing limbs on the Town's right-of-ways.
Category:	Prevention
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, and Winter Storms
Lead Agency/Department Responsible:	Public Works Dept.
Estimated Cost:	Moderate
Potential Funding Sources:	Local
Implementation Schedule:	Continuous implementation (as needed)
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Brookford Mitigation Action 1	Storm Drain System Routine inspection of storm drain system
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works Dept.
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. The Town implements a routine inspection program for all storm drains

Brookford Mitigation Action 2	Utility Lines Study the feasibility of burying utility lines
Category:	Property Protection
Hazard(s) Addressed:	Snow, Ice, and Wind
Lead Agency/Department Responsible:	Utility Companies
Estimated Cost:	Study – low
Potential Funding Sources:	
Implementation Schedule:	3 – 6 years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Deleted. Duke Energy routinely prunes and clears limbs near utility lines and poles

Brookford Mitigation Action 3	Right-of-way Routinely prune and clear limbs on the right-of-way
Category:	Emergency Services
Hazard(s) Addressed:	Snow, Ice, and Wind
Lead Agency/Department Responsible:	Public Works Dept.
Estimated Cost:	Moderate
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. The Town routinely prunes and clears limbs from right-of-ways.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Town of Catawba

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High			
	Moderate	✓		
	Limited			

2009 Mitigation Actions

Catawba Mitigation Action 1	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ol style="list-style-type: none"> a) Evaluate and consider the adoption of “higher standards” that are proven to reduce flood damage (including additional freeboard, setbacks, limitations on lower-level enclosure size, and the prohibition on use of fill). b) Develop a checklist for review of building/development permit plans and for inspection of development in floodplains (a model is available). c) Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute). d) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. e) Maintain supplies of FEMA/NFIP materials to help property owners evaluate measures to reduce potential hazard damage. Make available in public buildings, local library, website, etc. and inform people who they can call to learn more information.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	N/A (staff time)
Potential Funding Sources:	N/A
Implementation Schedule:	Immediate and ongoing through 2015
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Mitigation Action 2	Develop a debris management plan.	
Category:	Emergency Services	
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire and Winter Storms	
Lead Agency/Department Responsible:	Administration	
Estimated Cost:	To be determined	
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-Disaster Mitigation program; Economic Development Administration – Disaster Mitigation Planning and Technical Assistance.	
Implementation Schedule:	July 2010	
Priority (High, Moderate, Low):	High	

Catawba Mitigation Action 3	Establish pre-disaster debris management contracts.	
Category:	Emergency Services	
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire and Winter Storms	
Lead Agency/Department Responsible:	Administration / Police Dept. / Fire Dept. / Public Works	
Estimated Cost:	N/A	
Potential Funding Sources:	N/A	
Implementation Schedule:	July 2010	
Priority (High, Moderate, Low):	High	

Catawba Mitigation Action 4	Develop a post-disaster reconstruction plan to facilitate decision making following a hazard event.	
Category:	Prevention	
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides	
Lead Agency/Department Responsible:	Administration / Police Dept. / Fire Dept.	
Estimated Cost:	To be determined	
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-Disaster Mitigation program; Economic Development Administration – Disaster Mitigation Planning and Technical Assistance.	
Implementation Schedule:	July 2010	
Priority (High, Moderate, Low):	High	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Mitigation Action 5	Draft a new stormwater drain map.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Administration / Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	July 2010
Priority (High, Moderate, Low):	High

Catawba Mitigation Action 6	Routinely clean and repair stormwater drains.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Staff time
Potential Funding Sources:	To be determined
Implementation Schedule:	NA
Priority (High, Moderate, Low):	High

Catawba Mitigation Action 7	Routinely prune trees and clear tree limbs hanging in right of way.
Category:	Emergency Services
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, and Winter Storms
Lead Agency/Department Responsible:	Relies upon private company (Asplundh) through Duke Energy
Estimated Cost:	Staff time
Potential Funding Sources:	To be determined
Implementation Schedule:	NA
Priority (High, Moderate, Low):	High

Catawba Mitigation Action 8	Identify and strengthen facilities to function as public shelters.
Category:	Prevention
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Administration
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation program.
Implementation Schedule:	NA
Priority (High, Moderate, Low):	Low

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Mitigation Action 9	Provide hazard susceptibility checklist for homeowners to conduct their own inspections.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Administration
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-Disaster Mitigation program, Citizen Corps. <i>Many FEMA and American Red Cross publications are available at no cost.</i>
Implementation Schedule:	July 2010
Priority (High, Moderate, Low):	Low

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Catawba Mitigation Action 1	Conduct on-site assessment of EMS/Rescue Base at 300 2nd Street, SW to determine actual flood risk and the need for hazard mitigation measures.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Administration
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program, Flood Mitigation Assistance Program (Planning); Economic Development Administration – Disaster Mitigation Planning and Technical Assistance; Department of Agriculture – Watershed Surveys and Planning.
Implementation Schedule:	July 2006
Priority:	#1
2009 Status:	Completed. According to the most recent Flood Insurance Rate Maps the building is no longer within the designated floodplain.

Catawba Mitigation Action 2	Develop a debris management plan.
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Administration
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program; Economic Development Administration – Disaster Mitigation Planning and Technical Assistance.
Implementation Schedule:	July 2006
Priority:	#2
2009 Status:	Deferred. The Town is working on an RFP for a pre-disaster contract for debris management and clean-up services. This will be the new #1 priority action for the 2009 plan.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Mitigation Action 3		Establish pre-disaster debris management contracts.
Category:	Emergency Services	
Hazard(s) Addressed:	Multiple	
Lead Agency/Department Responsible:	Administration / Police Dept. / Fire Dept. / Public Works	
Estimated Cost:	N/A	
Potential Funding Sources:	N/A	
Implementation Schedule:	July 2006	
Priority:	#3	
2009 Status:	Deferred. The Town is working on an RFP for a pre-disaster contract for debris management and clean-up services. This will be the new #2 priority action for the 2009 plan.	

Catawba Mitigation Action 4		Develop a post-disaster reconstruction plan to facilitate decision making following a hazard event.
Category:	Prevention	
Hazard(s) Addressed:	Multiple	
Lead Agency/Department Responsible:	Administration / Police Dept. / Fire Dept.	
Estimated Cost:	To be determined	
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program; Economic Development Administration – Disaster Mitigation Planning and Technical Assistance.	
Implementation Schedule:	July 2006	
Priority:	#4	
2009 Status:	Deferred. Town staff has had insufficient time to work on this action. This will be the new #3 priority action item for the 2009 plan.	

Catawba Mitigation Action 5		Draft a new stormwater drain map.
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Administration / Public Works	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	July 2006	
Priority:	#5	
2009 Status:	Deferred. Town staff has had insufficient time to work on this action. The action will require GPS data gathering. This will be the new #4 priority action item for the 2009 plan.	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Mitigation Action 6	Routinely clean and repair stormwater drains.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Staff time
Potential Funding Sources:	To be determined
Implementation Schedule:	July 2006
Priority:	#6
2009 Status:	Completed / Ongoing. The Town's Public Works department completes this action as needed. This will be the new #5 priority action item for the 2009 plan.

Catawba Mitigation Action 7	Routinely prune trees and clear tree limbs hanging in right of way.
Category:	Emergency Services
Hazard(s) Addressed:	Severe Thunderstorms and Tornadoes, Winter Storms, Hurricanes and Tropical Storms
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Staff time
Potential Funding Sources:	To be determined
Implementation Schedule:	July 2006
Priority:	#7
2009 Status:	Completed / Ongoing. This action has not been implemented by the Town due to lack of tree pruning equipment/apparatus, however the Town relies upon private company (Asplundh) through Duke Energy. This will be the new #6 priority action item for the 2009 plan.

Catawba Mitigation Action 8	Incorporate the procedures for tracking high water marks following a flood into emergency response plans.
Category:	Emergency Services
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Administration / Public Works
Estimated Cost:	Staff time
Potential Funding Sources:	To be determined
Implementation Schedule:	July 2006
Priority:	#8
2009 Status:	Deleted. Not implemented due to lack of funding. Town believes the action is not feasible and should be removed from the Town's Mitigation Action Plan.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Mitigation Action 9		Identify and strengthen facilities to function as public shelters.
Category:	Prevention	
Hazard(s) Addressed:	Multiple	
Lead Agency/Department Responsible:	Administration	
Estimated Cost:	To be determined	
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.	
Implementation Schedule:	July 2006	
Priority:	#9	
2009 Status:	Completed / Ongoing. Catawba United Methodist Church currently serves as a shelter in Town. Currently this location serves the Town's needs. The Town will identify additional locations if the need ever arises. This will be the new #7 priority action item for the 2009 plan.	

Catawba Mitigation Action 10		Revise and update regulatory floodplain maps.
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Administration	
Estimated Cost:	To be determined	
Potential Funding Sources:	North Carolina Floodplain Mapping Program	
Implementation Schedule:	July 2006	
Priority:	#10	
2009 Status:	Completed. The Town adopted the new FIRMs along with a new Flood Hazard Ordinance in 2007.	

Catawba Mitigation Action 11		Regularly calculate/document the amount of flood prone property preserved as open space.
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Administration	
Estimated Cost:	Staff time	
Potential Funding Sources:	To be determined	
Implementation Schedule:	July 2006	
Priority:	#11	
2009 Status:	Deleted. This action has not begun because it is difficult to identify permanently preserved property, and currently there is a lack funding for completing this action.	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Mitigation Action 12	Provide hazard susceptibility checklist for homeowners to conduct their own inspections.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Administration
Estimated Cost:	To be determined
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program, Citizen Corps. <i>Many FEMA and American Red Cross publications are available at no cost.</i>
Implementation Schedule:	July 2006
Priority:	#12
2009 Status:	Deferred. Town staff has had insufficient time to implement this action. Some materials may already be available from FEMA and American Red Cross. The Town could identify these materials and make them available at Town Hall and on the Town's website. This will be the new #8 priority action item for the 2009 plan.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

City of Claremont

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High	✓		
	Moderate			
	Limited			

2009 Mitigation Actions

Claremont Mitigation Action 1	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ol style="list-style-type: none"> a) Maintain digital FEMA elevation certificates for all construction in the floodplain. b) Evaluate and consider the adoption of “higher standards” that are proven to reduce flood damage (including additional freeboard, setbacks, limitations on lower-level enclosure size, and the prohibition on use of fill). c) Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute). d) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. e) Send information about the flood hazard and promote the availability of flood insurance through regularly scheduled mailings (such as the dissemination of handouts with annual property tax notices, utility bills, etc.).
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Immediate and ongoing through 2015
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Claremont Mitigation Action 2	Install quick-connect emergency generator hook-ups for critical facilities.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Multiple (Public Works, Administration, Police, Fire)
Estimated Cost:	Low
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-Disaster Mitigation program.
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	High

Claremont Mitigation Action 3	Encourage residents to continue with voluntary water restrictions and water conservation actions.
Category:	Prevention
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Planning & Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	Moderate

Claremont Mitigation Action 4	Verify height of manholes in flood zones with GPS and ensure proper equipment is present.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	Moderate

Claremont Mitigation Action 5	Explore the feasibility of a Capital Improvement Plan to extend water lines to areas near the City with well problems.
Category:	Prevention
Hazard(s) Addressed:	Drought
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Claremont Mitigation Action 6	Explore the feasibility of municipal purchase or private donations of floodplain areas for use as greenways.
Category:	Prevention / Natural Resource Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local / private donation
Implementation Schedule:	Moderate Range (2-3 years)
Priority (High, Moderate, Low):	Moderate

Claremont Mitigation Action 7	Routinely inspect and maintain fire hydrants
Category:	Emergency Services
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Fire Dept./Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate, all hydrants are to be tested once a year

Claremont Mitigation Action 8	Encourage residents to keep storm drains clear of debris during storms (to assist, not rely solely on Public Works)
Category:	Flood / Property Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate (Less than 1 year)
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Claremont Mitigation Action 1		Install quick-connect emergency generator hook-ups for critical facilities.
Category:	Prevention	
Hazard(s) Addressed:	Multiple	
Lead Agency/Department Responsible:	Multiple (Public Works, Administration, Police, Fire)	
Estimated Cost:	Low	
Potential Funding Sources:	Department of Homeland Security – Emergency Management Performance Grants, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.	
Implementation Schedule:	Short Range	
Priority (High, Moderate, Low):	High	
2009 Status:	Deferred. Due to lack of funding, this action plan has not been completed. Staff has investigated the emergency facilities for the hook-up, and there are issues with the different facilities having different voltage and other issues. Staff is currently exploring possibility of applying for grant money to equip the critical facilities.	

Claremont Mitigation Action 2		Require the burial of electrical, telephone, and cable lines for new development.
Category:	Prevention	
Hazard(s) Addressed:	Summer and Winter Storms	
Lead Agency/Department Responsible:	Planning	
Estimated Cost:	Marginal cost to developer. No cost to Town.	
Potential Funding Sources:	Private sector	
Implementation Schedule:	Short Range	
Priority (High, Moderate, Low):	High	
2009 Status:	Completed. New Zoning Ordinance and Subdivision Ordinance require for all new utilities to be buried.	

Claremont Mitigation Action 3		Routinely inspect and clean debris from drainage system.
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Public Works	
Estimated Cost:	Minimal	
Potential Funding Sources:	Local	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	Moderate	
2009 Status:	Completed / Ongoing. Public Works Department inspects and cleans catch basins, ditches, and gutters weekly. During rain events, Public Works inspects and cleans the drainage system. This is Standard Operating Procedure within Public Works Department.	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Claremont Mitigation Action 4	Require developers to plan for on-site sediment retention.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works / Planning
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. The City's Water Supply Watershed Protection Ordinance requires any development over one acre to have on-site sediment retention. The entire jurisdiction of Claremont is with-in the WS-IV Protected Area.

Claremont Mitigation Action 5	Update and revise Flood Damage Prevention Ordinance when new flood maps are available.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (2-3 years)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. The City of Claremont enacted updated Flood Insurance Rate Maps (FIRMs) and the revised Flood Damage Prevention Ordinance in August 2007.

Claremont Mitigation Action 6	Explore the feasibility of municipal purchase or private donations of floodplain areas for use as greenways.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (2-3 years)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Deferred. Action is deferred due to lack of funding. Greenways have been proposed along one floodplain area.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Claremont Mitigation Action 7	Explore the feasibility of the County administering flood damage prevention program and ordinances for all the municipalities in the County.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (1-3 years)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Deferred. The City contracts with Catawba County to conduct building inspections for final inspection of any structures that must obtain an elevation certificate. The City currently administers most of the flood damage prevention programs.

Claremont Mitigation Action 8	Routinely inspect and maintain fire hydrants
Category:	Emergency Services
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	Fire Dept./Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate, all hydrants are to be tested once a year
2009 Status:	Completed / Ongoing. Hydrants are inspected twice a year. Maintenance is performed bi-annually and the hydrants are flowed once per year.

Claremont Mitigation Action 9	Encourage residents to keep storm drains clear of debris during storms (to assist, not rely solely on Public Works)
Category:	Flood / Property protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate (Less than 1 year)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. Public Works employees educate citizens they encounter to keep the storm drains and ditches clear. Citizens have received outreach material in the water bill concerning stormwater and keeping drainage system clear.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Claremont Mitigation Action 10	Complete and maintain FEMA elevation certificates for all new / improved buildings in floodplains
Category:	Prevention
Hazard(s) Addressed:	Flooding
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. The City of Claremont enacted updated Flood Insurance Rate Maps (FIRMs) and the revised Flood Damage Prevention Ordinance in August 2007. To date, there have not been any structures built or modified that require elevation certificates. A filing system has been established.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

City of Conover

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High			
	Moderate		✓	
	Limited			

2009 Mitigation Actions

Conover Mitigation Action 1	<p>Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions:</p> <ul style="list-style-type: none"> a) Hold informative work sessions for newly elected officials and new appointees to planning commissions and appeals/variance boards, to provide an overview of floodplain management, the importance of participating in the NFIP, and the implications of failing to enforce the requirements of the program or failing to properly handle variance requests. b) Maintain supplies of FEMA/NFIP materials to help property owners evaluate measures to reduce potential hazard damage. Make available in public buildings, local library, website, etc. and inform people who they can call to learn more information.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning & Economic Development
Estimated Cost:	Minimal (staff time)
Potential Funding Sources:	N/A
Implementation Schedule:	Within 1-2 years and ongoing as necessary
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Conover Mitigation Action 2	Work with the local media to highlight mitigation practices for homeowners during wildfire and winter storm seasons through the development of Public Service Announcements (PSAs).	
Category:	Public Education and Awareness	
Hazard(s) Addressed:	Wildfire, Winter Storms	
Lead Agency/Department Responsible:	Fire Department	
Estimated Cost:	TBD	
Potential Funding Sources:	TBD	
Implementation Schedule:	1-2 years	
Priority (High, Moderate, Low):	Moderate	

Conover Mitigation Action 3	Create a strategic energy plan for City facilities.	
Category:	Energy Conservation	
Hazard(s) Addressed:	Designed to address Climate Change and its long-term potential to increase the frequency and severity of natural hazards including Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms and Dam/Levee Failure.	
Lead Agency/Department Responsible:	Environmental Planner	
Estimated Cost:	TBD	
Potential Funding Sources:	State energy office	
Implementation Schedule:	1 year	
Priority (High, Moderate, Low):	Moderate	

Conover Mitigation Action 4	Aggressively encourage tree trimming of large older trees near structures, power lines and Right of Way.	
Category:	Property Protection / Public Education & Awareness	
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Winter Storms	
Lead Agency/Department Responsible:	Public Works/ Duke Energy	
Estimated Cost:	TBD	
Potential Funding Sources:	TBD	
Implementation Schedule:	1-2 years	
Priority (High, Moderate, Low):	Moderate	

Conover Mitigation Action 5	Ensure firefighters are properly trained in brush/wildland fire fighting techniques.	
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	Fire Department	
Estimated Cost:	\$1,200	
Potential Funding Sources:	Local	
Implementation Schedule:	1-2 years	
Priority (High, Moderate, Low):	Moderate	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Conover Mitigation Action 6		Routinely inspect and maintain fire hydrants.
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	Fire Department	
Estimated Cost:	Minimal	
Potential Funding Sources:	Local	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	Moderate	

Conover Mitigation Action 7		Consider establishing a local reserve fund for public mitigation measures.
Category:	Prevention	
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides	
Lead Agency/Department Responsible:	Finance/Public Works/Planning	
Estimated Cost:	TBD	
Potential Funding Sources:	TBD	
Implementation Schedule:	1-2 years	
Priority (High, Moderate, Low):	Moderate	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Conover Mitigation Action 1		Adopt erosion, sediment control and storm water regulations for pre and post construction.
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Environmental Planner	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1 – 2 Years	
Priority (High, Moderate, Low):	High	
2009 Status:	Completed. City Council adopted the Stormwater Ordinance in July of 2007. The City of Conover also has a sediment and erosion control permit when disturbing less than one acre.	

Conover Mitigation Action 2		Develop Vulnerability Assessment Plan.
Category:	Prevention	
Hazard(s) Addressed:	Multiple	
Lead Agency/Department Responsible:	Fire Department / Public Works	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1 year	
Priority (High, Moderate, Low):	High	
2009 Status:	Deleted. 2009 mitigation plan update satisfies any need for a separate vulnerability assessment plan at this time.	

Conover Mitigation Action 3		Require fire extinguishers in common areas for all Multi-Family dwelling units.
Category:	Property Protection	
Hazard(s) Addressed:	Fire	
Lead Agency/Department Responsible:	Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	1 year	
Priority (High, Moderate, Low):	Moderate	
2009 Status:	Completed.	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Conover Mitigation Action 4	Work with the local media to highlight mitigation practices for homeowners during fire and ice seasons through the development of Public Service Announcements.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Fire/Ice
Lead Agency/Department Responsible:	Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1 – 2 Years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing.

Conover Mitigation Action 5	Aggressively encourage tree trimming of large older trees near structures, power lines and Right of Way.
Category:	Property Protection
Hazard(s) Addressed:	Wind and Ice
Lead Agency/Department Responsible:	Public Works / Duke Energy
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1 – 2 Years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. The City has a quarterly newsletter that this issue is and can continue to be featured in.

Conover Mitigation Action 6	Establish a local reserve fund for public mitigation measures.
Category:	Prevention
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Planning / Finance
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1 – 2 Years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Deferred. Included in 2009 action plan (Action #6).

Conover Mitigation Action 7	Identify, strengthen and designate certain municipal buildings and schools as “Safe Sites” during disasters.
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1 year
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. Fire Stations, Police Station and Public Works facilities are all “Safe Sites”

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Conover Mitigation Action 8	Install quick connect emergency generator hook-ups for critical facilities, including "Safe Sites".
Category:	Structural Projects
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Fire Department / Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	2 – 3 Years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. Generators are located at each of the City's "Safe Sites"

Conover Mitigation Action 9	Develop a Terrorism Response Plan.
Category:	Prevention
Hazard(s) Addressed:	Terrorism
Lead Agency/Department Responsible:	Fire Department / Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1 – 2 Years
Priority (High, Moderate, Low):	Moderate
2009 Status:	Deleted. No longer considered a local priority and not relevant under the natural hazard mitigation plan.

Conover Mitigation Action 10	Routine scheduled cleaning of debris from drainage system, stormwater drains and low-lying bridges.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	Low
2009 Status:	Completed / Ongoing. After large rain events crews from Public Works will clear drainage systems.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

City of Hickory

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High			✓
	Moderate			
	Limited			

2009 Mitigation Actions

Hickory Mitigation Action 1	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ol style="list-style-type: none"> a) Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. b) Develop a checklist for review of building/development permit plans and for inspection of development in floodplains. c) Sponsor a periodic NFIP workshop for local surveyors and builders. d) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. e) Develop handouts for permit applications on specific issues such as installation of manufactured homes in flood hazard areas according to HUD's installation standards, or guidance on improving/repairing existing buildings to better withstand potential hazards.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning Department
Estimated Cost:	Minimal (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Immediate and ongoing through 2015
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Hickory Mitigation Action 2	Contact owners of repetitive loss property #0102594 (as described in <i>Section 6: Vulnerability Assessment</i>) to inform them of the technical assistance and hazard mitigation grant funding assistance made available to owners of repetitively flooded properties through the North Carolina Division of Emergency Management and Federal Emergency Management Agency. This includes information on the pre-disaster grant funding program provided by FEMA through its Hazard Mitigation Assistance (HMA) programs, and particularly the Repetitive Flood Claims (RFC) program that can provide up to 100% in federal funds for eligible hazard mitigation activities.
Category:	Public Education & Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning Department
Estimated Cost:	Minimal (staff time)
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Complete by June 2010 (in advance of next FEMA Hazard Mitigation Assistance funding cycle)
Priority (High, Moderate, Low):	High

Hickory Mitigation Action 3	Continue to enforce the requirements of Hickory's 2007 Flood Damage Prevention Ordinance. This ordinance regulates construction standards for development activities within Special Flood Hazard Areas (SFHA's).
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Planning and Engineering Departments
Estimated Cost:	On-going and budgeted activity
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	On-Going
Priority (High, Moderate, Low):	High

Hickory Mitigation Action 4	Monitor and enforce the provisions of Hickory's NPDES Phase 2 Stormwater Control Ordinance, and continue to provide community outreach to the general public as to the ordinance's requirements, and the importance of adequate stormwater control.
Category:	Prevention / Public Education & Awareness
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Engineering Department
Estimated Cost:	On-going and budgeted activity
Potential Funding Sources:	City of Hickory General Fund and Stormwater Utility
Implementation Schedule:	On-Going
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Hickory Mitigation Action 5	Remove obstructions from drainage ways where located on public property or where a threat to a public improvement such as a road or drainage structure is identified.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Hickory Public Services Department
Estimated Cost:	On-going and budgeted activity
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	On-Going
Priority (High, Moderate, Low):	High

Hickory Mitigation Action 6	Designate emergency thoroughfares and update to necessary standards. Work with NCDOT representatives to identify emergency thoroughfares and identify necessary improvements to enhance safety and improve functionality during emergency events.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	City of Hickory Fire Department and NC Department of Transportation
Estimated Cost:	Not Determined
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	On-Going
Priority (High, Moderate, Low):	High

Hickory Mitigation Action 7	Continue to routinely prune trees and clear tree limbs hanging over rights of way to enhance safety and improve function during an emergency. In addition, continue policy requiring underground utility lines in new development and redevelopment projects.
Category:	Prevention
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Winter Storms
Lead Agency/Department Responsible:	Hickory Planning and Public Services Departments
Estimated Cost:	On-Going and budgeted activity
Potential Funding Sources:	City of Hickory General Fund and Private Developers
Implementation Schedule:	On-going
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Hickory Mitigation Action 8	Implementation of Hickory Police Department Radio Frequency Inoperability hardware, to prevent communication breakdowns due to compatibility issues between radio frequencies and telephone systems.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Hickory Police Department
Estimated Cost:	\$20,000
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	In place by late 2009 early 2010
Priority (High, Moderate, Low):	High

Hickory Mitigation Action 9	Implementation of Skytower by Hickory Police Department. Skytower is an elevated platform capable of supporting police personnel and/or surveillance equipment.
Category:	Public Safety
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Hickory Police Department
Estimated Cost:	\$119,000
Potential Funding Sources:	JAG Grant
Implementation Schedule:	In place by 2010
Priority (High, Moderate, Low):	Moderate

Hickory Mitigation Action 10	Implementation of second ladder company within the Hickory Fire Department. Second ladder company will provide Hickory with the ability to reduce the existing 43 square mile coverage area for the single ladder company into two 21.5 square mile coverage areas for the two companies.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Hickory Fire Department
Estimated Cost:	\$475,000
Potential Funding Sources:	Five year federal grant followed by funding by City of Hickory General Fund
Implementation Schedule:	In place by late 2009 / early 2010
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Hickory Mitigation Action 11	Takeover of duties of existing Hickory Rescue Light Rescue. Hickory Fire Department will assume the responsibilities and response areas of the existing Hickory Rescue Light Rescue operated by Catawba County.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Hickory Fire Department
Estimated Cost:	Not Determined
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	In place by 2010
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Hickory Mitigation Action 1	Continue to enforce the requirements of Article 12 of the City of Hickory Land Development Code, Flood Protection requirements. This Article affects the construction standards and practices for all structures located within or adjacent to identified flood plains.
Category:	Prevention
Hazard(s) Addressed:	Flooding
Lead Agency/Department Responsible:	City of Hickory Planning Department
Estimated Cost:	Estimated \$10,000 per year in staff administration costs.
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. The City recently updated both its flood protection requirements (ordinance) and FIRM maps. In addition to these updates, the City's Planning and Development and Engineering Departments continue to review development proposal for projects located within SFHA's, and ensure all such projects comply with all required development standards. Insuring development activities within SFHA's adhere to prescribed development standards is an on-going process.

Hickory Mitigation Action 2	Monitor the effectiveness of Article 12 of the Land Development Code Flood Protection requirements and amend as necessary to improve effectiveness.
Category:	Prevention
Hazard(s) Addressed:	Flooding
Lead Agency/Department Responsible:	City of Hickory Planning Department
Estimated Cost:	Estimated \$5,000 per year in staff administration costs.
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. Monitoring of the effectiveness of flood prevention standards is an on-going process. As noted in Action 1 above, the City monitors its flood prevention standards and will modify such standards should their overall effectiveness be deemed unacceptable. The monitoring of flood protection requirements is an on-going and continual process.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Hickory Mitigation Action 3	Remove obstructions from drainage ways where located on public property or where a threat to a public improvement such as a road or drainage structure is identified.
Category:	Prevention
Hazard(s) Addressed:	Flooding
Lead Agency/Department Responsible:	City of Hickory Public Works Department
Estimated Cost:	This is an ongoing and budgeted activity
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. The removal of obstructions from drainage courses on public property is an on-going activity, and is addressed on an as-need basis. Work crews from the City's Public Services Department monitors such drainage courses, especially after significant meteorological events, and remove obstructions as they are identified.

Hickory Mitigation Action 4	Designate emergency thoroughfares and update to necessary standards. Work with NCDOT representatives to identify emergency thoroughfares and identify necessary improvements to enhance safety and improve functionality during emergency events.
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	City of Hickory Planning Department / North Carolina Department of Transportation
Estimated Cost:	Not determined at this time
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. The City works through its internal Transportation Committee, and through local community meetings to determine and update emergency routes. This is an on-going activity, and is periodically reviewed to determine if modifications are necessary to improve functionality. This activity is on-going.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Hickory Mitigation Action 5	Continue to routinely prune trees and clear tree limbs hanging over rights of way to enhance safety and improve function during an emergency.
Category:	Prevention
Hazard(s) Addressed:	Winter Storms, Severe Thunderstorm and Tornadoes, Hurricanes and Tropical Storms
Lead Agency/Department Responsible:	City of Hickory Public Works Department
Estimated Cost:	This is an ongoing and budgeted activity
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. The City's Public Services Department works in conjunction with Duke Energy Carolinas to remove tree limbs and other obstructions from rights-of-way to ensure utility lines are not damaged during storms or similar events. In addition, Hickory City Council has adopted development standards for both new development and redevelopment activities, which require utility lines to be placed under ground. This activity is on-going.

Hickory Mitigation Action 6	Continue to annually evaluate and conduct a detailed needs assessment for emergency response services.
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	City of Hickory Fire Department/City of Hickory Police Department/ City of Hickory Planning Department
Estimated Cost:	Estimated \$5,000 per year in staff administration cost
Potential Funding Sources:	City of Hickory General Fund
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. The City holds quarterly meetings to assess its emergency services capabilities. These meetings are intended to identify any and all areas where improvements may be made, and to identify and correct deficiencies. This is a continual activity.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Hickory Mitigation Action 7	Coordinate with willing, voluntary owners of repetitive loss properties to apply for hazard mitigation funding to implement projects that reduce or eliminate the long-term risk of future flood damages. This may be accomplished through property buyouts, elevation or retrofit projects that remove or alter insured, at-risk repetitive loss structures.
Category:	Prevention
Hazard(s) Addressed:	Flooding
Lead Agency/Department Responsible:	City of Hickory Planning Department
Estimated Cost:	To be determined on a case-by-case basis
Potential Funding Sources:	Department of Homeland Security – Flood Mitigation Assistance Program, Hazard Mitigation Grant Program, Pre-disaster Mitigation Program.
Implementation Schedule:	As necessary
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. The City continues to monitor flooding situations and repetitive loss properties. To date this action has not been acted upon, as willing participants have not been identified for inclusion in the program. The City will continue to monitor on-the-ground situations and assist willing property owners as they are identified.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Town of Long View

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High			
	Moderate		✓	
	Limited			

2009 Mitigation Actions

Long View Mitigation Action 1	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ol style="list-style-type: none"> a) Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. b) Encourage or require certain local staff positions to obtain and maintain Certified Floodplain Manager (CFM) certification. c) Hold informative work sessions for newly elected officials and new appointees to planning commissions and appeals/variance boards, to provide an overview of floodplain management, the importance of participating in the NFIP, and the implications of failing to enforce the requirements of the program or failing to properly handle variance requests. d) Conduct a review of other regulatory programs and planning tools, such as the comprehensive plan and zoning ordinance, and report on opportunities to improve consistency with the objectives of floodplain management. e) Maintain supplies of FEMA/NFIP materials to help property owners evaluate measures to reduce potential hazard damage. Make available in public buildings, local library, website, etc. and inform people who they can call to learn more information.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate and ongoing through 2015
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Long View Mitigation Action 2	Routinely inspect and clear debris from drainage system.	
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Public Works	
Estimated Cost:	Minimal	
Potential Funding Sources:	Local	
Implementation Schedule:	Immediate/Ongoing	
Priority (High, Moderate, Low):	Moderate	

Long View Mitigation Action 3	Routinely prune trees and clear tree limbs hanging in the right-of-way	
Category:	Prevention	
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Winter Storms	
Lead Agency/Department Responsible:	Public Works	
Estimated Cost:	Minimal/ Budgeted Activity	
Potential Funding Sources:	Local	
Implementation Schedule:	Immediate/Ongoing	
Priority (High, Moderate, Low):	High	

Long View Mitigation Action 4	Require the burial of electrical, telephone, and cable lines for new development	
Category:	Prevention	
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Winter Storms	
Lead Agency/Department Responsible:	Planning	
Estimated Cost:	Minimal cost to developer. No cost to the Town.	
Potential Funding Sources:	Private Sector	
Implementation Schedule:	Short Range	
Priority (High, Moderate, Low):	High	

Long View Mitigation Action 5	Routinely inspect and maintain fire hydrants	
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	Fire Department	
Estimated Cost:	Minimal/ Budgeted Activity	
Potential Funding Sources:	Local	
Implementation Schedule:	Immediate/Ongoing	
Priority (High, Moderate, Low):	Moderate	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Long View Mitigation Action 6	Ensure firefighters are properly trained and equipped for brush/forest firefighting techniques.
Category:	Emergency Service
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Fire Department
Estimated Cost:	Local
Potential Funding Sources:	Yearly Budgeted Activity
Implementation Schedule:	Immediate/Ongoing
Priority (High, Moderate, Low):	Moderate

Long View Mitigation Action 7	Provide hazard susceptibility checklist for homeowners to conduct their own inspections.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Administration and Planning
Estimated Cost:	To be determined
Potential Funding Sources:	FEMA and American Red Cross
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	Moderate

Long View Mitigation Action 8	Explore the feasibility of municipal purchase or private donations of floodplain areas for use as greenways.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (2-3 years)
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Long View Mitigation Action 1	Develop and implement master plan for making Long View Town Hall self contained/ autonomous for disaster events, including but not limited to: <ul style="list-style-type: none"> a) Water supply <ul style="list-style-type: none"> 1) on-site water tank b) Generator of sufficient power to operate heating system, lights, base station radios, computers for entire complex. Installed quick connect for generator if not a dedicated generator. c) Back up base station radio
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Town of Long View
Estimated Cost:	On-site water tank - installed \$2,500 Duel fuel (diesel/ natural gas) generator - (generator includes fuel line from Town Hall to existing diesel storage tank) - \$75,000 Back up base radio station- \$5,500
Potential Funding Sources:	Town participation up to 50 percent with assistance from State and/ or Federal Grants
Implementation Schedule:	September of 2004
Priority:	#1
2009 Status:	Completed. All of the above have been completed as of September 2004. The generator is a duel fuel (diesel/natural gas) generator that includes a fuel line from Town Hall to an existing diesel storage tank.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Long View Mitigation Action 2	Develop and implement overall stormwater plan, including but not limited to: a) Complete mapping of existing culverts and drainage system; b) Developing plans and policy for limiting existing and future stormwater problems or events.
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Town of Long View
Estimated Cost:	Mapping of culverts and drain system - \$1,500 Developing Plans and Policy - \$1,500
Potential Funding Sources:	Town participation up to 50 percent with assistance from State and/ or Federal Grants
Implementation Schedule:	July 2005
Priority (High, Moderate, Low):	#2
2009 Status:	Partially Completed. The mapping of the culverts and drainage system is partially completed. The most recent areas of development have not been mapped. This action will be continued. The plans and policy for limiting existing future stormwater problems and events are in place. This action most recently occurred in August 2007 with the adoption of the State model Flood Damage Prevention Ordinance.

Long View Mitigation Action 3	Provide for back-up communications in the Long View Public Works Department, including but not limited to the installation of base station for use in emergency situations to coordinate the activity of the public works department.
Category:	Emergency Services
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Town of Long View
Estimated Cost:	Base Station Cost \$3,200 - installed
Potential Funding Sources:	Town participation up to 50 percent with assistance from State and/ or Federal Grants
Implementation Schedule:	July of 2005
Priority (High, Moderate, Low):	#3
2009 Status:	Completed. This action has been completed as of July 2005.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Long View Mitigation Action 4	Update existing street signs with block ranges for quick location.	
Category:	Emergency Services	
Hazard(s) Addressed:	Multiple	
Lead Agency/Department Responsible:	Town of Long View	
Estimated Cost:	\$4,000 for signs. Use of existing staff for implementation.	
Potential Funding Sources:	Town participation up to 50 percent with assistance from State and/ or Federal Grants	
Implementation Schedule:	April of 2004	
Priority (High, Moderate, Low):	#4	
2009 Status:	Deferred. This action has been determined to be infeasible due to a lack of political support, funding, and personnel to implement such a project.	

Long View Mitigation Action 5	Establish pre-disaster debris removal plan.	
Category:	Emergency Services	
Hazard(s) Addressed:	Multiple	
Lead Agency/Department Responsible:	Town of Long View	
Estimated Cost:	N/A	
Potential Funding Sources:	N/A	
Implementation Schedule:	September of 2004	
Priority:	#5	
2009 Status:	Completed. The Town has executed pre-disaster debris management contracts (on file at the Long View Public Works Department) in addition to preparing a street snow removal plan (October 2004).	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Town of Maiden

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High			
	Moderate		✓	
	Limited			

2009 Mitigation Actions

Maiden Mitigation Action 1	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ol style="list-style-type: none"> a. Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. b. Develop a checklist for review of building/development permit plans and for inspection of development in floodplains (a model is available). c. Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute). d. Maintain a map of areas that flood frequently (e.g., areas where repetitive loss properties are located) and prioritize those areas for inspection immediately after the next flood. If outside FEMA special flood hazard areas, consider requiring existing NFIP regulatory standards (compliance with existing ordinance) through overlay zoning, etc. e. Conduct a review of other regulatory programs and planning tools, such as the comprehensive plan and zoning ordinance, and report on opportunities to improve consistency with the objectives of floodplain management.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	N/A (staff time)
Potential Funding Sources:	N/A
Implementation Schedule:	Immediate and ongoing through 2015
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Maiden Mitigation Action 2	Develop a dam failure study for the Maiden Reservoir dam and continue to address the long-term maintenance or removal of the dam structure with relevant state agencies.
Category:	Prevention
Hazard(s) Addressed:	Dam Failure / Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	Local/State/Federal
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	High

Maiden Mitigation Action 3	Continue with the installation of more effective risers to sewer manholes to reduce infiltration and inflow during heavy rains.
Category:	Structural Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High

Maiden Mitigation Action 4	Routinely prune trees and clear tree limbs hanging near electrical lines.
Category:	Prevention
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Winter Storms
Lead Agency/Department Responsible:	Public Works – Electrical Division
Estimated Cost:	\$25,000 annually
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High

Maiden Mitigation Action 5	Routinely inspect and clean debris from drainage system.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Continuous
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Maiden Mitigation Action 6	Explore the feasibility of municipal purchase and/or private donation of floodplain areas for use as greenways.
Category:	Prevention / Natural Resource Protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (2-3 years)
Priority (High, Moderate, Low):	Moderate

Maiden Mitigation Action 7	Continue to routinely inspect and maintain fire hydrants.
Category:	Emergency Services
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Fire Dept./Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Annually
Priority (High, Moderate, Low):	Moderate

Maiden Mitigation Action 8	Continue to ensure firefighters are properly trained and equipped for brush/wildland fire fighting techniques.
Category:	Emergency Services
Hazard(s) Addressed:	Wildfire
Lead Agency/Department Responsible:	Fire Department
Estimated Cost:	\$1,000 per firefighter
Potential Funding Sources:	Local
Implementation Schedule:	Short Range (1-2 years)
Priority (High, Moderate, Low):	Moderate

Maiden Mitigation Action 9	Continue to encourage residents to keep storm drains clear of debris during storms (to assist, not rely solely on Public Works).
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate (Less than 1 year)
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Maiden Mitigation Action 10	Construct a remote fire station to house at least two trucks and additional firefighting and life/safety equipment necessary for first responders during periods of emergency or disasters.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Fire Department / Administration
Estimated Cost:	Moderate
Potential Funding Sources:	Grants / Taxes
Implementation Schedule:	2-5 years
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Maiden Mitigation Action 1	Develop a dam failure study for the Maiden Reservoir dam and prepare an emergency action plan if the dam is to be retained.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Undetermined
Potential Funding Sources:	Local/State/Federal
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	High
2009 Status:	Partially completed. The Town recently completed the preparation of an EAP for the dam and is continuing to address the long-term maintenance or removal of the dam structure with state agencies.

Maiden Mitigation Action 2	Install watertight covers or inflow guards on sewer manholes.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High
2009 Status:	Partially completed. Project has been updated to installing more effective risers to reduce infiltration and inflow (INI).

Maiden Mitigation Action 3	Verify that electrical components of sewage lift stations are above the base flood elevation.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Low
Potential Funding Sources:	Local
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	High
2009 Status:	Completed. According to latest floodplain maps all stations are located outside of the floodplain.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Maiden Mitigation Action 4	Install quick-connect emergency generator hook-ups for critical facilities.
Category:	Prevention
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	Multiple (Public Works, Administration, Recreation, Police, Fire)
Estimated Cost:	Low
Potential Funding Sources:	Local/State/Federal
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	High
2009 Status:	Completed. All facilities have backup generators installed on site.

Maiden Mitigation Action 5	Routinely prune trees and clear tree limbs hanging near electrical lines.
Category:	Prevention
Hazard(s) Addressed:	Winter Storm
Lead Agency/Department Responsible:	Public Works – Electrical Division
Estimated Cost:	\$25,000 annually
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High
2009 Status:	Completed / ongoing. Continuous maintenance project.

Maiden Mitigation Action 6	Require the burial of electrical, telephone, and cable lines for new development.
Category:	Prevention
Hazard(s) Addressed:	Summer and Winter Storms
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Marginal cost to developer. No cost to Town.
Potential Funding Sources:	Private sector
Implementation Schedule:	Short Range
Priority (High, Moderate, Low):	High
2009 Status:	Completed. Ordinance in place, we have three electrical companies inside town limits: The Town of Maiden, REA and Duke Energy.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Maiden Mitigation Action 7	Routinely clean debris from support bracing underneath low-lying bridges.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate
2009 Status:	Deleted. Town has no maintenance responsibility for bridges as they are maintained by NCDOT, however debris issues are communicated accordingly.

Maiden Mitigation Action 8	Routinely inspect and clean debris from drainage system.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. Public works staff routinely checks during their other duties for and cleans as necessary all drainage inlets and culverts.

Maiden Mitigation Action 9	Require developers to plan for on-site sediment retention.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works / Planning
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. Ordinance in place with all sites disturbing over 1 acre to be permitted through Catawba County for inspections. All sites less than one acre are inspected by the code enforcement officer.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Maiden Mitigation Action 10	Update and revise the Flood Damage Prevention Ordinance when new flood maps are available.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (2-3 years)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. New requirements and maps adopted September 5, 2007.

Maiden Mitigation Action 11	Explore the feasibility of municipal purchase of floodplain areas for use as greenways.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (2-3 years)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Deferred. None purchased; donation of land being sought.

Maiden Mitigation Action 12	Explore the feasibility of the County administering flood damage prevention program and ordinances for all the municipalities in the County.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	Study cost is minimal.
Potential Funding Sources:	Local
Implementation Schedule:	Moderate Range (1-3 years)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Deleted. To date the County will not take on the administration of local flood damage programs and ordinances.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Maiden Mitigation Action 13	Routinely inspect and maintain fire hydrants.
Category:	Emergency Service
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	Fire Dept./Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate, all hydrants are to be tested once a year
2009 Status:	Completed / Ongoing. Fire department inspects and tests hydrants at least once a year.

Maiden Mitigation Action 14	Ensure firefighters are properly trained and equipped for brush/wildland fire fighting techniques.
Category:	Emergency Service
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	Fire Department
Estimated Cost:	\$1,000 per firefighter
Potential Funding Sources:	Local
Implementation Schedule:	Short Range (1-2 years)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Partially completed. Training is in place, equipment on truck is in place, and specialized brush/wild land clothing is not included in firefighting kit due to cost and lower risk as compared to other fire types.

Maiden Mitigation Action 15	Encourage residents to keep storm drains clear of debris during storms (to assist, not rely solely on Public Works).
Category:	Flood / Property protection
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Public Works
Estimated Cost:	Minimal
Potential Funding Sources:	Local
Implementation Schedule:	Immediate (Less than 1 year)
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. Level of public assistance is very low and hard to find in this area

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

City of Newton

		HAZARD RISK		
		Low	Moderate	High
OVERALL CAPABILITY	High			
	Moderate		✓	
	Limited			

2009 Mitigation Actions

Newton Mitigation Action 1	Maintain continued compliance with the National Flood Insurance Program (NFIP) through implementation of the following specific actions: <ul style="list-style-type: none"> f. Maintain FEMA digital elevation certificates for all construction in the floodplain. g. Evaluate permit application forms to determine possible modifications focused on flood hazard prevention. h. Develop a checklist for review of building/development permit plans and for inspection of development in floodplains. i. Establish a goal to have each plan reviewer and building inspector attend a related training periodically (for example, the North Carolina Association of Floodplain Managers Annual Conference or Fall Floodplain Institute).
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning & Economic Development
Estimated Cost:	N/A (staff time)
Potential Funding Sources:	N/A
Implementation Schedule:	Immediate and ongoing through 2015
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Newton Mitigation Action 2	Routinely inspect and clear debris from drainage system.	
Category:	Prevention	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Newton Public Works	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	High	

Newton Mitigation Action 3	Routinely prune trees and clear tree limbs hanging in right-of-way.	
Category:	Prevention	
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Winter Storms	
Lead Agency/Department Responsible:	Newton Public Works	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	High	

Newton Mitigation Action 4	Implement a comprehensive infrastructure mapping strategy to document locations and attributes of infrastructure systems.	
Category:	Prevention	
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides	
Lead Agency/Department Responsible:	Newton Public Works	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	High	

Newton Mitigation Action 5	Evaluate existing utility network and create list of infrastructure protection projects based on highest potential hazard impacts.	
Category:	Prevention	
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides	
Lead Agency/Department Responsible:	Newton Public Works	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	High	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Newton Mitigation Action 6	Increase dimensions of drainage culverts in troublesome areas.	
Category:	Structural Projects	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Newton Public Works	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	Moderate	

Newton Mitigation Action 7	Train fire personnel in wildfire, brush, and forest fire firefighting techniques/practices.	
Category:	Emergency Services	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	Newton Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	Moderate	

Newton Mitigation Action 8	Work with local media to establish a public wildfire awareness program.	
Category:	Public Education and Awareness	
Hazard(s) Addressed:	Wildfire	
Lead Agency/Department Responsible:	Newton Fire Department	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	Moderate	

Newton Mitigation Action 9	Establish a seasonal hazard awareness campaign.	
Category:	Public Education and Awareness	
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides	
Lead Agency/Department Responsible:	Newton Public Information Officer	
Estimated Cost:	To be determined	
Potential Funding Sources:	To be determined	
Implementation Schedule:	Immediate	
Priority (High, Moderate, Low):	Low	

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Newton Mitigation Action 1	Routinely inspect and clear debris from drainage system.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Newton Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. The City Public Works Department routinely maintains the system to keep it clear from debris.

Newton Mitigation Action 2	Design a "natural runoff" or zero discharge" policy for stormwater in subdivision design.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2009 Status:	Completed. The City has adopted Erosion Control and Stormwater Ordinances that address natural runoff requirements specific to the placement of BMP facilities.

Newton Mitigation Action 3	Routinely prune trees and clear tree limbs hanging in right-of-way.
Category:	Prevention
Hazard(s) Addressed:	Wind / Ice
Lead Agency/Department Responsible:	Newton Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. A full-time tree trimming position was created and filled by an experienced trimmer. Tree work is routinely done throughout the year.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Newton Mitigation Action 4	Establish a "hazard awareness week" in coordination with the media to promote hazard awareness (seasonal).
Category:	Prevention
Hazard(s) Addressed:	Multiple
Lead Agency/Department Responsible:	City of Newton Public Information Officer.
Estimated Cost:	Brochure cost
Potential Funding Sources:	To be determined
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High
2009 Status:	Deferred. No action taken to date. Updated plan will reflect specific initiatives the City is willing to undertake in the future.

Newton Mitigation Action 5	Increase dimensions of drainage culverts in troublesome areas.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Newton Public Works
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. Since the adoption of this plan in 2004, the City has resized a number of culverts at an average rate of three (3) per year. This is an ongoing effort that receives attention once an issue has been identified.

Newton Mitigation Action 6	Prohibit or limit floodplain development through regulatory and/or incentive-based measures.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Planning Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	1-2 years
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. In 2007, the City adopted new NFIP maps and an updated Flood Damage Prevention Ordinance, which follows the State's model ordinance. In addition to the minimum standards set forth by FEMA, the City-adopted standards require the lowest habitable floor elevation be constructed (at a minimum) two feet above the base floor elevation (+2' BFE) as indicated on the updated FIRMs.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Newton Mitigation Action 7	Work with the local media to highlight wildfire mitigation practices for homeowners during fire season.
Category:	Prevention
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	Newton Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. The Newton Fire Department has been proactive in educating the public on wildfire mitigation through local newspaper outlets. A larger educational campaign is undertaken by the NC Division of Forest Resources and NFD utilizes the State-organized initiative to assist in their landowner education program.

Newton Mitigation Action 8	Ensure local, urban firefighters become properly trained and exercised in brush/forest fire firefighting techniques.
Category:	Prevention
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	NC Forestry / Newton Fire Department
Estimated Cost:	To be determined
Potential Funding Sources:	Funded through local Community College, FEMA Curriculum
Implementation Schedule:	Immediate
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. NFD works with the NC Division of Forest Resources on an ongoing basis to train firefighters on proper wildfire practices.

Newton Mitigation Action 9	Develop a canned public awareness campaign for use in times of high fire danger.
Category:	Prevention
Hazard(s) Addressed:	Fire
Lead Agency/Department Responsible:	City of Newton Fire Department
Estimated Cost:	N/A
Potential Funding Sources:	Use free local advertisements.
Implementation Schedule:	Immediately when high fire hazard is declared.
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. As described in Item #7, NFD promotes fire education programs on a local level. NFD defers to the NC Division of Forest Resources on a more comprehensive and broad "canned" public awareness campaign.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Newton Mitigation Action 10	Revise and update regulatory floodplain maps.
Category:	Prevention
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City of Newton Planning Department
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	On going
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. The City adopted new Flood Insurance Rate Maps for Catawba County in 2007. Map revisions are maintained by the City and maps are updated as necessary.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Valley Chapter American Red Cross

2009 Mitigation Actions

Catawba Valley Chapter American Red Cross Mitigation Action 1	Recruit and retain volunteers to assist with Disaster Action Teams. These teams are the Red Cross front line volunteers, and are the initial responders for Red Cross.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Catawba Valley Chapter American Red Cross
Estimated Cost:	Printed material and training - \$500
Potential Funding Sources:	None
Implementation Schedule:	On-going
Priority (High, Moderate, Low):	High

Catawba Valley Chapter American Red Cross Mitigation Action 2	Recruit other NGO's, such as civic groups and church groups to train in shelter operations and become partners to operate shelters during time of disasters.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Catawba Valley Chapter American Red Cross
Estimated Cost:	Printed material \$250
Potential Funding Sources:	None
Implementation Schedule:	On-going
Priority (High, Moderate, Low):	High

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Valley Chapter American Red Cross Mitigation Action 3	Continue public education efforts through “Together We Prepare.” This is a hard hitting program that helps families prepare for the potential of a disaster. It focuses on safety and minimizing loss.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Catawba Valley Chapter American Red Cross
Estimated Cost:	Printed materials - \$250, leave behinds - \$500 Equipment - LCD projector \$5,000, Overhead projector \$500, Laptop \$2,000 Staff - \$1,000
Potential Funding Sources:	Approx. \$200 is expected to be available from the Chapter, the remaining is pending through unidentified sources.
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	High

Catawba Valley Chapter American Red Cross Mitigation Action 4	Continue to participate in a lead role in the CERT Program.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Citizens Corp/Hickory Fire Department
Estimated Cost:	Equipment for Training - \$5,000 Meals & Travel \$250 Printing - \$100 Staff -\$1,000
Potential Funding Sources:	TBD – in collaboration with other CERT funded agencies
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Valley Chapter American Red Cross Mitigation Action 5	Continue with the development of a Shelter Coordination Plan with the Humane Society so that pets can be sheltered in close proximity to people being sheltered in Red cross Shelters. This will make it more likely that people needing shelter will take advantage of Red Cross Shelters and they will have a place for their pets.
Category:	Emergency Services
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	Emergency Services Department – Catawba Valley Chapter American Red Cross
Estimated Cost:	Staff - \$1,000 Printed Material - \$250
Potential Funding Sources:	None
Implementation Schedule:	Pending availability of staff/volunteers
Priority (High, Moderate, Low):	Moderate

Catawba Valley Chapter American Red Cross Mitigation Action 6	Continue to promote the installation of emergency generators in all public buildings. This could be a code requirement for new buildings as well.
Category:	Structural Projects
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Severe Thunderstorms and Tornadoes, Wildfire, Drought, Winter Storms, Erosion, Dam/Levee Failure, Earthquakes, Sinkholes and Landslides
Lead Agency/Department Responsible:	County Building Department with the Catawba Valley Chapter of the American Red Cross as an advocate.
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	To be determined
Priority (High, Moderate, Low):	Moderate

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Status Update on 2004 Mitigation Actions

Catawba Valley Chapter American Red Cross Mitigation Action 1	Work with the State and County Emergency Management to increase response capability and equipment required to respond to acts of terrorism.
Category:	Emergency Services
Hazard(s) Addressed:	Weapons of Mass Destruction
Lead Agency/Department Responsible:	Emergency Services Department, Catawba Valley Chapter American Red Cross
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	Spring of 2004 after completion of Terrorism Response Plan
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. In the Chapter Response Plan, there are annexes for Aviation, Nuclear, Weapons of Mass Destruction, Technology and Transportation, all of which include acts of terrorism. Also, several of the Chapter's disaster leadership teams have attended training on response to acts of terrorism.

Catawba Valley Chapter American Red Cross Mitigation Action 2	Public Education – The Catawba Valley Chapter presents Together We Prepare. This is a hard hitting program that helps families prepare for the potential of a disaster. It focuses on safety and minimizing loss.
Category:	Public Education and Awareness
Hazard(s) Addressed:	Multi-Hazards
Lead Agency/Department Responsible:	Catawba Valley Chapter American Red Cross
Estimated Cost:	Printed materials - \$250, leave behinds - \$500 Equipment - LCD projector \$5,000, Overhead projector \$500, Laptop \$2,000 Staff - \$1,000
Potential Funding Sources:	Approx. \$200 is expected to be available from the Chapter, the remaining is pending through unidentified sources.
Implementation Schedule:	Ongoing – Target is to present to 1,000 people in 2004
Priority (High, Moderate, Low):	High
2009 Status:	Completed / Ongoing. The Chapter presents three to four of these classes each month, and has a booth annually at the County fair. The Chapter also works with local fire departments to have booths set up in key locations such as Valley Hills Mall, Home Depot, and Lowe's Hardware.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Valley Chapter American Red Cross Mitigation Action 3	Develop a Terrorism Response Plan – The Catawba Valley Chapter is developing a Terrorism Response Plan for inclusion in its multi-hazard “Disaster Response Plan”.
Category:	Prevention
Hazard(s) Addressed:	Weapons of Mass Destruction
Lead Agency/Department Responsible:	Emergency Services Department- Catawba Valley Chapter American Red Cross
Estimated Cost:	Staff labor - \$2,500 Printing and distribution - \$150
Potential Funding Sources:	Chapter Budget
Implementation Schedule:	First quarter 2004
Priority (High, Moderate, Low):	High
2009 Status:	Completed. The National American Red Cross has developed a template for all Disaster Response Plans that the Chapter must follow. This plan was set up with required Annexes, all of which include Terrorism Response.

Catawba Valley Chapter American Red Cross Mitigation Action 4	Participate in a lead role in the CERT Program.
Category:	Emergency Services
Hazard(s) Addressed:	Multi-Hazard
Lead Agency/Department Responsible:	Citizens Corp/Hickory Fire Department
Estimated Cost:	Equipment for Training - \$5,000 Meals & Travel \$250 Printing - \$100 Staff -\$1,000
Potential Funding Sources:	TBD – in collaboration with other CERT funded agencies
Implementation Schedule:	Ongoing
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. The Chapter has several members of its Disaster Leadership that have become CERT instructors, and assist with each of the CERT classes. Several of the Chapter’s volunteers have been through the class as well.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Valley Chapter American Red Cross Mitigation Action 5	Develop a Shelter Coordination Plan with the Humane Society so that pets can be sheltered in close proximity to people being sheltered in Red cross Shelters. This will make it more likely that people needing shelter will take advantage of Red Cross Shelters and they will have a place for their pets.
Category:	Emergency Services
Hazard(s) Addressed:	Multi-Hazards
Lead Agency/Department Responsible:	Emergency Services Department – Catawba Valley Chapter American Red Cross
Estimated Cost:	Staff - \$1,000 Printed Material - \$250
Potential Funding Sources:	None
Implementation Schedule:	Pending availability of staff/volunteers
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. This is an on-going project that needs more work. The county has a “Companion Animal Mobile Equipment Trailer” (CAMET) that can be brought to a shelter to help house pets. This trailer is a State of North Carolina asset that is housed here in Catawba County and controlled by the County Animal Control. It contains 45 large and 15 medium cages, as well as other equipment that might be needed.

Catawba Valley Chapter American Red Cross Mitigation Action 6	Include Mitigation Information on the Chapter Web site.
Category:	Prevention
Hazard(s) Addressed:	Multi-Hazards
Lead Agency/Department Responsible:	Catawba Valley Chapter American Red Cross in conjunction with Catawba County Emergency Management
Estimated Cost:	Staff - \$500
Potential Funding Sources:	Pending
Implementation Schedule:	January 2004
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed. Disaster Preparedness’ “Three Steps” is on the web site.

MITIGATION ACTION PLANS

CATAWBA COUNTY, NORTH CAROLINA
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Catawba Valley Chapter American Red Cross Mitigation Action 7	Promote the installation of emergency generators in all public buildings. This could be a code requirement for new buildings as well.
Category:	Structural Projects
Hazard(s) Addressed:	Multi-Hazards
Lead Agency/Department Responsible:	County Building Department with the Catawba Valley Chapter of the American Red Cross as an advocate.
Estimated Cost:	To be determined
Potential Funding Sources:	To be determined
Implementation Schedule:	To be determined
Priority (High, Moderate, Low):	Moderate
2009 Status:	Completed / Ongoing. The Catawba Valley Chapter has worked with several churches as well as the Catawba County Schools to try to get generator hook ups in some of their buildings. We currently have only three sites in Catawba County with generators, but several more will soon have hook ups to they can be plugged in.

Catawba Valley Chapter American Red Cross Mitigation Action 8	Promote a standard hook up for emergency generators such that any portable generator could be simply connected to it for supply of power to vital circuits in homes and/or public buildings.
Category:	Prevention
Hazard(s) Addressed:	Multi-Hazard
Lead Agency/Department Responsible:	Suggest that the County be the lead and the Red Cross would support
Estimated Cost:	\$2,500 for an engineering firm to develop a DRAFT standard.
Potential Funding Sources:	To be determined
Implementation Schedule:	Pending funding
Priority (High, Moderate, Low):	Low
2009 Status:	Deferred. With all the different types of generators, this is a very difficult task. Different size and types of building will require different sized generators. The Chapter continues to coordinate with the County as lead on this activity.