

REQUEST FOR BOARD ACTION

**HENDERSON COUNTY
BOARD OF COMMISSIONERS**

MEETING DATE: May 2, 2011

SUBJECT: Hazard Mitigation Plan Adoption

PRESENTER: Rocky Hyder

ATTACHMENTS: Adoption Resolution, Mitigation Action Plan

SUMMARY OF REQUEST:

Pursuant to North Carolina General Statute 166A and 44 Code of Federal Regulations 201.6 Henderson County has updated the Multi-Jurisdictional Hazard Mitigation Plan. This document is required in order to be eligible for State or Federal disaster assistance.

The plan was reviewed and approved by the North Carolina Division of Emergency Management and the Federal Emergency Management Agency and is presented for consideration and approval by the Board of Commissioners.

Public input has been encouraged through two public hearings conducted by the Multi-Jurisdictional Hazard Mitigation Planning Committee.

BOARD ACTION REQUESTED:

Approve the resolution adopting the Hazard Mitigation Plan.

Suggested Motion:

I move the Board adopt the Henderson County Multi-Jurisdictional Hazard Mitigation Plan by resolution as presented.

ADOPTION RESOLUTION
HENDERSON COUNTY MULTI-JURISDICTIONAL
NATURAL HAZARD MITIGATION PLAN

WHEREAS, the Henderson County Multi-jurisdictional Natural Hazards Mitigation Plan has been prepared by the Henderson County Multi-jurisdictional Natural Hazards Mitigation Planning Committee; and,

WHEREAS, the Henderson County Multi-jurisdictional Natural Hazards Mitigation Plan has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, the County of Henderson is a local unit of government that has afforded the citizens an opportunity to comment and provide input to the Plan and the actions in the Plan; and,

WHEREAS, the Henderson Board of Commissioners has reviewed the Plan and affirms to participate in the Workgroup that will review the Plan every year and update it no less than every five years;

NOW THEREFORE, BE IT RESOLVED by the Henderson County Board of Commissioners that the County of Henderson adopts the Henderson County Multi-jurisdictional Natural Hazards Mitigation Plan as this jurisdiction's Multi-hazard Mitigation Plan, and resolves to execute the actions in the Plan.

ADOPTED this Second day of May, 2011 at the meeting of the Henderson County Board of Commissioners

County of Henderson

_____, Chairman

Mitigation Action Implementation

Henderson County

MITIGATION ACTION IMPLEMENTATION

Henderson County

Priority Ranking	Mitigation Action Types	Mitigation Capability Categories
High Medium Low	0= No mitigation action 1= Prevention 2= Property Protection 3= Natural Resource Protection 4= Structural Projects 5= Public Information 6= Emergency Services	0= No mitigation action 1= Planning 2= Regulation 3= Acquisition 4= Taxation 5= Education 6= Spending
No project have been deleted or Deferred.		
Projects Highlighted in Yellow have been completed		

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
Tropical Cyclones, Winter Storms, Extreme heat/cold, Tornadoes, Flooding, Riverine Erosion, Drought, Landslides, Earthquakes, Wildfires, Hazardous Materials, Dam/Levee Failures, Severe Thunderstorms /Windstorms	<p><i>Goal: 1.1.1</i> <i>Hold a County Hazard Mitigation Seminar for County residents.</i></p> <p><i>Objective:</i> <i>Establish easy access to the citizens Of Henderson County on the issues Of Hazard Mitigation in the County</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Develop a Website that allows for the viewing of the County HMP.</i> • <i>Provide for the capability of the Citizens to submit comments or to ask questions electronically about the plan.</i> • <i>Allow for telephone questions by posting a number for Citizens to call.</i> 	Henderson County and all its jurisdictions	5	5	Planning & Emergency Management	8/2003 - Ongoing until next plan update
Tropical Cyclones, Winter Storms, Extreme heat/cold, Tornadoes, Flooding,	<p><i>Goal: 1.2.1</i> <i>Seek Public input on the County's Hazard Mitigation Plan for future Updates</i></p> <p><i>Objective:</i> <i>Provide the most updated HMP</i></p>	Henderson County and all its jurisdictions	5	5	Planning & Emergency Management	Ongoing until next plan update

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
Riverine Erosion, Drought, Landslides, Earthquakes, Wildfires, Hazardous Materials, Dam/Levee Failures, , Severe Thunderstorms /Windstorms	<p><i>possible with public input</i></p> <p>Actions:</p> <ul style="list-style-type: none"> • <i>Public in advance the annual Meeting for the HMP Planning Committee meeting and seek public input at that time.</i> • <i>Have a survey form available on the EM website where the HMP is posted for citizens to inquire or make suggestions to Emergency Management Office.</i> 					
Flood	<p>Goal: 1.1.2 <i>Educate contractors about quality redevelopment and safe housing Development.</i></p> <p>Objective: <i>Establish and maintain information on quality redevelopment and safe housing</i></p> <p>Actions:</p> <ul style="list-style-type: none"> • <i>Develop workshop to educate contractors about quality redevelopment and safe housing development.</i> • <i>Provide information to all contractors via, mail, email and public notices.</i> • <i>Provide the Permit Center Information about workshop</i> • <i>Conduct Workshop</i> • <i>Provide workshop information on County Website</i> 	Henderson County and all its jurisdictions	1	5	Planning, Engineering, Building Insp	12/2006 - Ongoing until next plan update
Flood, Landslide, Wildfire, Dam/Levee Failure	<p>Goal: 1.1.3 <i>Safe housing development information home buyers</i></p> <p>Objective: <i>Establish and maintain information for General public</i></p>	Henderson County and all its jurisdictions	5	5	Planning, Engineering, Bldg Insp	7/2005 - Ongoing until next plan update

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	<p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Develop necessary information into a brochure that is easy read and understand</i> • <i>Distribute these brochures to the Permit Center, Building Suppliers, Insurance and Real Estate office as well as County and municipal buildings</i> 					
<p>Tropical Cyclones, Winter Storms, Extreme heat/cold, Tornadoes, Flooding, Riverine Erosion, Drought, Landslides, Earthquakes, Wildfires, Hazardous Materials, Dam/Levee Failures, Severe Thunderstorms /Windstorms</p>	<p><i>Goal: 2.1.11 Provide two way communications Equipment to key personnel and Emergency Service Providers</i></p> <p><i>Objective: Maintain clear and concise communications during emergencies</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Purchase of additional communications equipment.</i> • <i>Seek funds for this purchase.</i> • <i>10% of ES staff and key personnel have been issued communications equipment.</i> • <i>Seeking local funding</i> • <i>Upgraded county wide legacy System 2004</i> • <i>Install 3 State Viper System sites</i> 	<p>Henderson County and all its jurisdictions</p>	<p>6</p>	<p>3</p>	<p>Emergency Services</p>	<p>9/2004 - Ongoing until next plan update</p>
<p>Flood, Landslide Wildfire, Winter Storms, Tropical Cyclones</p>	<p><i>Goal: 2.12 Include 311 systems and reverse 911 System for messaging</i></p> <p><i>Objective: Provide emergency notification to Citizens of Henderson County and its Municipalities.</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Seek out the most feasible</i> 	<p>Henderson County and all its jurisdictions</p>	<p>6</p>	<p>1</p>	<p>Emergency Services & 9-1-1 Center</p>	<p>6/2009 - Ongoing until next plan update</p>

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
	<p><i>311 systems and reverse 911 systems and acquire them via purchase or contracted service.</i></p> <ul style="list-style-type: none"> • <i>Agreement with municipalities in the use of the system for their benefit</i> • <i>Budget for annual operation and maintenance</i> <p><i>Development of SOG for the Use of the system</i></p>					
<p>Tropical Cyclones, Winter Storms, Extreme heat/cold, Tornadoes, Flooding, Riverine Erosion, Drought, Landslides, Earthquakes, Wildfires, Hazardous Materials, Dam/Levee Failures, Severe Thunderstorms /Windstorms</p>	<p><i>Goal: 2.2.1 Establish auxiliary power for all Primary buildings and schools.</i></p> <p><i>Objective: Ensure that critical facilities function when power has been disrupted.</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Equip facilities with auxiliary power (generators).</i> • <i>Planning and analyzing existing buildings as to required electrical requirements.</i> • <i>Determine cost to equip each facility</i> • <i>Establish standards for all new Construction of county buildings and schools that they be equipped with generators or prewired for generator connect.</i> • <i>Upgrade Courthouse generator</i> • <i>.Continue to seek State and Federal funding</i> 	<p>Henderson County and all its jurisdictions</p>	<p>6</p>	<p>1</p>	<p>Emergency Services, Public Schools, Central Svcs</p>	<p>4/2005 - Ongoing until next plan update</p>
<p>Flood (to continue compliance with NFIP), Riverine Erosion</p>	<p><i>Goal: 3.1.1 Develop a County Storm Water Management Plan</i></p> <p><i>Objective: Improve the County ability to protect Natural resources and ecosystem from Extensive flooding and erosion</i></p>	<p>Henderson County and all its jurisdictions</p>	<p>2</p>	<p>2</p>	<p>Planning, Engineering</p>	<p>6/2009 - Ongoing until next plan update</p>

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
	<p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Install stream gauges</i> • <i>Collect data on stream water, height and velocity</i> • <i>Monitor water and sewer lines located within floodplain</i> 					

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
Flood	<p>Goal: 3.1.2 <i>Incorporated into local ordinances construction standards for privately owned bridges</i></p> <p>Objective: <i>Standards for building privately owned bridges</i></p> <p>Actions:</p> <ul style="list-style-type: none"> • <i>Develop standards and ordinances for privately owned bridges.</i> • <i>Seek guidance from the State of NC</i> • <i>Seek legal advice from County attorney</i> • <i>Seek information from Other counties and states that have established these standards</i> • <i>Once standards have been established, seek approval thru appropriate officials.</i> 	Henderson County and all its jurisdictions	4	2	Engineering	1/2011 - Ongoing until next plan update
Flood	<p>Goal: 3.2.1 <i>Monitor water and sewer lines in the floodplain</i></p> <p>Objective: <i>To maintain quality of drinkable water ensure that water lines exposed in the floodplain are monitored for breaks and leaks. Also monitor the sewer lines for breaks to ensure no contamination of the floodplain due to ruptured sewer lines.</i></p> <p>Actions:</p> <ul style="list-style-type: none"> • <i>GIS database has setup an appropriate layer for documentation of water and sewer leaks in the floodplain</i> 	Henderson County and all its jurisdictions	1	1	Engineering And GIS	7/2007 - Ongoing until next plan update

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	<ul style="list-style-type: none"> • <i>Ensure that visual checks are done on a regular basis.</i> • <i>Ensure that any leaks are reported to GIS for documentation</i> 					
Flood (to continue compliance with NFIP)	<p><i>Goal: 3.2.2</i> <i>Install stream gauges on major waterways throughout the County</i></p> <p><i>Objective:</i> <i>Collect data on stream water as to its height and velocity</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Install and maintain stream gauges</i> • <i>Seek funding for gauges</i> • <i>Collection of data from 8 existing stream gauges located on all major streams</i> • <i>Provide real-time and Display hydrographs</i> • <i>Continue to seek funds for additional gauges</i> 	Henderson County and all its jurisdictions	1	3	Emergency Services	8/2008 - Ongoing Maintenance until next Plan Update
Flood, Riverine Erosion	<p><i>Goal: 4.1.1</i> <i>Develop an Erosion Department and a plan to include annual monitoring of sediment transport and erosion in the County and its jurisdictions.</i></p> <p><i>Objective:</i> <i>Mitigate the county's capability to erosion</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Conduct annual monitoring of sediment transport and erosion in the County and its jurisdictions.</i> • <i>Researched collected data on all streams, rivers in Henderson County</i> 	Henderson County and all its jurisdictions	3	1	Engineering	10/2007 - Implementation of Erosion Plan is ongoing until next plan update.

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
	<ul style="list-style-type: none"> • <i>Determine which rivers and streams has not data collection</i> • <i>Determine based on data collected if Plan is necessary</i> • <i>Seek funding for plan Development</i> • <i>Develop Erosion Dept.</i> • <i>Develop the Plan</i> • <i>Continuous research and annual monitoring of sediment transport.</i> 					
Flood, Riverine Erosion	<p><i>Goal: 4.1.2 Support State enforcement of Sedimentation and erosion control</i></p> <p><i>Objective: Enforce and support State Sedimentation regulations</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Create regulations for erosion control.</i> • <i>Erosion Dept to support this effort</i> • <i>Develop working relations with the State</i> 	Henderson County and all its jurisdictions	1	2	Engineering	10/2007 - Ongoing until next plan update
Landslide	<p><i>Goal: 5.1.1 Incorporate development and Construction standards into Zoning and Subdivision Ordinances</i></p> <p><i>Objective: Provide for more stringent stream buffer</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Develop standards into zoning and subdivision ordinances to provide for more stringent stream buffer.</i> • <i>Provide Public Information</i> • <i>Development of Policy</i> 	Henderson County and all its jurisdictions	1	2	Planning, Engineering, Code Enf	9/2007 – Ongoing until next plan update

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
	<ul style="list-style-type: none"> • <i>Perform preventative Maintenance acquisition</i> 					
Landslide	<p><i>Goal: 5.2.1 Implement scaling</i></p> <p><i>Objective: Method of preventative maintenance to reduce the amount of loose debris that could lead to a landslide</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Create regulations for development in areas prone to landslides, and reduce the amount of loose debris that could lead to a landslide.</i> • <i>Public information</i> • <i>Strategies identified</i> • <i>Develop and help implement plans to control landslides</i> 	Henderson County and all its jurisdictions	1	1	Engineering, Planning	6/2010 – Ongoing until next plan update
Earthquake	<p><i>Goal: 6.1.1 Determine what methods or devices are in place to secure equipment and furniture during earthquake.</i></p> <p><i>Objective: What equipment/furniture is currently secured if impacted by an earthquake</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Develop survey form</i> • <i>Submit survey form to all County agencies</i> • <i>Collect all the data</i> • <i>Determine what devices are currently in use</i> • <i>Determine if these devices should be used in other buildings</i> • <i>Budget for devices for other buildings</i> 	Henderson County and all its jurisdictions	1	1	Emergency Services	8/2010 - Ongoing until next plan update

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
	<ul style="list-style-type: none"> • <i>Install earthquake mitigation devices</i> 					
Earthquake	<p><i>Goal: 6.1.2 Establish policy to assure all computers equipment and furniture is secured if impacted by an earthquake.</i></p> <p><i>Objective: Secure all computer equipment and furniture so if impacted by an earthquake, it would not topple over.</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Research the type of equipment that is needed to secure computer equipment</i> • <i>Determine budget cost</i> • <i>Obtain funding</i> • <i>Development policy in how to use and what is to be secured</i> • <i>Purchase necessary Equipment</i> • <i>Install equipment</i> 	Henderson County and all its jurisdictions	1	2	Emergency Services, IT	12/2010 - Ongoing until next plan update
Earthquake	<p><i>Goal: 6.1.3 Provide GIS layer to show areas of County prone to more serious damage during an earthquake.</i></p> <p><i>Objective: Provide visual display of areas of the county that could be impacted by an earthquake</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Down loads maps from State and FEMA</i> • <i>Develop and highlight Areas of Henderson Co. that may be receive serious damage from an earthquake.</i> 	Henderson County and all its jurisdictions	2	1	GIS	6/2009

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
Wildfire	<p><i>Goal: 7.1.1 Coordinate with US Forestry Service to enforce burning bans.</i></p> <p><i>Objective: Enforce burning bans when established by the NC Forestry Service</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Maintain regular communications with US Forestry Service to enforce burning bans</i> • <i>Insure no permits are issued when a no burn has been established by NC Forestry Service</i> 	Henderson County and all its jurisdictions	2	5	Emergency Services	3/2003 - Ongoing until next plan update
Wildfire	<p><i>Goal: 7.1.2 Encourage development of buffers and green areas</i></p> <p><i>Objective: Enlarge buffers and green area</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Maintain regular communications on changes and updates on buffers and green areas</i> • <i>Review and recommend changes in policy that would increase buffers and green areas</i> • <i>Buffers and green areas added to Land use Codes</i> 	Henderson County and all its jurisdictions	2	1	Emergency Services, Planning	9/2007 - Ongoing until next plan update
Hazmat	<p><i>Goals: 8.1.1 Provide HAZMAT Training for Emergency Personnel</i></p> <p><i>Objective: Ensure Emergency personnel have adequate HAZMAT training</i></p> <p><i>Actions:</i></p>	Henderson County and all its jurisdictions	3	5	Emergency Services	4/2003 - Ongoing until next plan update

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates
	<ul style="list-style-type: none"> • <i>Determine the levels of training needed to meet current standards</i> • <i>Establish classes to meet current needs</i> • <i>Provide education to general public on household hazardous waste.</i> • <i>Establish a Household collection day.</i> • <i>Contract with a vendor to manage and dispose of household waste from collection site.</i> • <i>Implement classes and insure that training records reflect the current training</i> 					
Hazmat	<p><i>Goal: 8.1.2 Provide a visual display of current Hazmat events and types</i></p> <p><i>Objective: Ensure that all HAZMAT events are Reported to a central agency for documentation</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Ensure that all Emergency Services, Law Enforcement, Fire Department report HAZMAT incidents to 911</i> • <i>911 data will be provided GIS for data input or down Load.</i> 	Henderson County and all its jurisdictions	2	1	Emergency Services, GIS, 9-1-1 Center	2008 - Ongoing until next plan update

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates	8 C E
Hazmat	<p>Goal: 8.1.3 <i>Reaffirm plans with Emergency Service Agencies and providers for Isolation and Evacuation in HAZMAT events.</i></p> <p>Objective: <i>Ensure that all Emergency Workers are trained in HAZMAT in Evacuation and Isolation</i></p> <p>Actions:</p> <ul style="list-style-type: none"> • <i>Determine who has Received required HAZMAT training</i> • <i>Establish appropriate Level HAZMAT classes for Emergency Workers</i> • <i>Ensure that Emergency Workers have correct Level of training if they Are responding to HAZMAT events.</i> • <i>Develop continuing Education to meet State requirements for Expose to HAZMAT Events.</i> 	Henderson County and all its jurisdictions	6	5	Emergency Services	2008 - Ongoing until next plan update	\$
Dam Failure	<p>Goal: 9.1.1 <i>Database/levee database</i></p> <p>Objective: <i>Develop Dam/Levee database in GIS to provide visual display</i></p> <p>Actions:</p> <ul style="list-style-type: none"> • <i>Acquire information on Dams and levees from NC Dam Safety Program</i> • <i>Download or key the data Into GIS software to Provide a display of all Dams and levees</i> • <i>Develop an indentation Maps of all dams that Have the potential of Life threatening and property</i> 	Henderson County and all its jurisdictions	2	1	GIS	2008 - Ongoing until next plan update	\$

1 Hazard	2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates	8 C E
	<p><i>damage</i></p> <ul style="list-style-type: none"> • <i>Maintain updates as Changes take place</i> 						
Dam Failure	<p><i>Goal: 9.2.1 Grant application for properties with a high potential for damage or destruction due to a dam/levee failure.</i></p> <p><i>Objective: Acquisition grant application ready when funding is available</i></p> <p><i>Actions:</i></p> <ul style="list-style-type: none"> • <i>Conduct research to build a priority list of dams and levees and make it available to first responders.</i> • <i>Determine which will have a high potential for damage in case of failure</i> • <i>Maintain this list and educate emergency responders and 911 of the particular dams</i> 	Henderson County and all its jurisdictions	1	3	Planning, GIS	2008 - Ongoing until next plan update	\$

2 Mitigation Actions	3 Site/Location	4 Mitigation Action Type 0-6	5 Mitigation Capability Category 0-6	6 Responsible Party	7 Start And Completion Dates	8 Cost Estimates	9 Funding Source	10 Prior Rank High Med Low
<p>Goal: 10.1.1 <i>Grant application for Properties with a high potential for multi-Hazard events.</i></p> <p>Objective: <i>Acquisition grant application ready when funding is available</i></p> <p>Actions:</p> <ul style="list-style-type: none"> • <i>Develop a listing of Properties that are subject to multi-hazards</i> • <i>Development of a stand-alone Grant application</i> 	<p>US HWY 74 US HWY 9 Bat Cave</p>	<p>2</p>	<p>3</p>	<p>Planning, GIS</p>	<p>2008 - Ongoing until next plan update</p>	<p>\$ 0.00</p>	<p>Local staff</p>	<p>Low</p>