Wilson County Multi-Jurisdictional Hazard Mitigation Plan Executive Summary

In 2004, the County Board of Commissioners adopted the Wilson County Multi-Jurisdictional Hazard Mitigation Plan. During the same independency as well as the City of Wilson adopted their standalone plan. During the 2009 update, the County and all the original participating localities, along with the City of Wilson combined their efforts to form a more comprehensive countywide approach to hazard mitigation planning.

Came together.....The County extended an invitation to municipalities within the County to participate in the update and to expand the scope of the plan to a Multi-Jurisdictional Hazard Mitigation Plan. The City of Wilson, along with the Towns of Black Creek, Elm City, Lucama, Saratoga, Sims, and Stantonsburg chose to participate in the planning process. Plan accomplishments are outlined in further detail within each of the respective localities mitigation action goals, starting on page ES-6. The city of Wilson, in addition to the proposed actions, documented the prior achievements from the 2004 plan; those are specifically outlined in table ES-1.

Why Develop a Hazard Mitigation Plan?

The primary reason for developing a Hazard Mitigation Plan is to reduce a community's exposure to natural hazards by taking proactive, pre-disaster planning steps to limit development in hazard sensitive areas, particularly floodplain or flood hazard areas. The second reason is to comply with the hazard mitigation planning requirements established by the Federal Emergency Management Agency (FEMA) and the NC General Assembly and implemented through the NC Division of Emergency Management. The completion of this plan update provides compliance with the Stafford Act and Section 322 of the Disaster Mitigation Action of 2000, allowing Wilson County and all of the participating localities, funding opportunities for post disaster assistance in the event of a natural disaster. It should be noted that each locality is eligible by their own right for post disaster funding, not necessarily in combination with any other participating entity.

In recent years, the frequency and impact of natural disasters has increased not because natural hazards occur more frequently but because more people are choosing to live and work in locations that put them and their property at risk. "Since the 1960s, tremendous numbers of Americans have chosen to live in areas at risk from coastal storms, repeated flooding, and seismic activity, often with little or no attention to the need for sound building practices or land use policy. As a result, risk of disasters occurring in the wake of natural hazards has grown exponentially. For instance, by the year 2010 the number of people residing in the most hurricane-prone counties throughout the nation will have doubled. Likewise, while floods have caused a greater loss of life and property and have disrupted more families and communities than all other natural hazards combined, the rate of development in flood-prone areas continues to escalate, putting more people and property in danger."

While natural hazards cannot be prevented, local communities can use various means to reduce the vulnerability of people and property to damage. Communities can reduce exposure to future natural hazards by managing the location and characteristics of both the existing and future built environment. By utilizing location and construction techniques, a community can mitigate negative impacts and reduce future damage to both human lives and property.

¹ Local Hazard Mitigation Planning Manual, North Carolina Division of Emergency Management, November 1998, p.1.

Hazard mitigation is defined as "any action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards". Hazard mitigation includes three types of activities:

- 1. Structural mitigation constructing dam and levee projects to protect against flooding, constructing disaster-resistant structures, and retrofitting existing structures to withstand future hazardous events:
- 2. Non-structural mitigation development of land use plans, zoning ordinances, subdivision regulations, and tax incentives and disincentives to discourage development in high-hazard risk areas; and
- 3. Educational programs educating the public about potential natural hazards, the importance of mitigation, and how to prepare to withstand a disaster.

"A fundamental premise of mitigation strategy is that current dollars invested in mitigation activities will significantly reduce the demand for future dollars by reducing the amount needed for emergency recovery, repair, and reconstruction following a disaster. Mitigation also calls for conservation of natural and ecologically sensitive areas (such as wetlands, floodplains, and dunes) which enables the environment to absorb some of the impact of hazard events. In this manner, mitigation programs help communities attain a level of sustainability, ensuring longterm economic vitality and environmental health for the community as a whole."2

Participants in the Planning Process

The planning process was overseen by the Wilson County Multi-Jurisdictional Hazard Mitigation Stakeholders which met regularly during the planning process. The stakeholders also identified other interested parties who were invited to participate in planning meetings.

Plan Adoption

Once the draft plan is approved by NC Emergency Management (NCEM) and the Federal Emergency Management Agency (FEMA) the Wilson County Multi-Jurisdictional Plan will be adopted by the Wilson County Board of Commissioners and the respective elected boards of the municipalities of Black Creek, Elm City, Lucama, Saratoga, Sims, Stantonsburg and Wilson under the authority and police powers granted to the counties and municipalities of the State of North Carolina by North Carolina General Statutes (N.C.G.S., Chapter 153A and Chapter 160A).

Study Conclusions

FEMA requires that each community nationwide evaluate exposure to thirteen known natural hazards:

- Coastal and Riverine Erosion
- Dam and Levee Failures
- Droughts and Heat Waves
- Earthquakes
- Winter Storms and Freezes
- Floods
- Hurricanes and Coastal Storms
- Expansive Soils and Land Subsidence Avalanches
- Severe Storms/Hail/Tornados

- Tsunamis
- Volcanoes
- Wildfires

² Local Hazard Mitigation Planning Manual, p. 4.

Through the planning process it was determined that the County is not at risk for coastal erosion, tsunamis, avalanches, or volcanoes and that there is "low" risk of riverine erosions, dam and levee failures, earthquakes, and expansive soils/land subsidence (including landslides/sinkholes). Six hazards were rated "moderate" risk – droughts and heat waves, floods, hurricanes and coastal storms, severe storms and tornadoes, wildfires, and winter storms and freezes. No hazards were rated as being a "high" risk.

Droughts and Heat Waves

In general, communities can have little influence or impact on mitigating the impact of droughts/heat waves on the local government level except through ensuring adequate water supplies for normal circumstances and through implementation of water conservation measures when drought conditions are imminent. Similarly, heat waves have wide ranging effects that are almost impossible to combat at the local government level. Local communities, therefore, must depend upon State and Federal agencies for assistance.

<u>Floods</u>

Flooding is often associated with hurricanes and coastal storms (most often general flooding) as well as with severe summer storms (typically flash flooding). Floods are the easiest hazard to quantify and isolate as flooding occurs in known locations.

The severity of a flood is generally dependent upon the amount of rainfall, prior soil conditions (including ground cover), and in the case of coastal counties, the severity (height) of the storm surge. Flood hazard vulnerability can be decreased through adoption and enforcement of local land use regulations and through cooperative, regional efforts to ensure that coastal and river front properties are elevated for protection and that upstream jurisdictions do not contribute to increased downstream flooding problems.

High Winds (Severe Storms/Tornadoes and Hurricanes/Coastal Storms)

Severe storms and tornadoes as well as hurricanes and coastal storms present high wind hazards. This hazard is mainly combated through building codes, building construction and proper placement of trees and tree pruning to reduce the likelihood of damage caused by falling trees and limbs. Enforcement of the current State building code and enhancement of the code in regards to wind resistance will prove the most beneficial in addressing high winds.

Wildfires

Fortunately, wildfires in North Carolina, although frequent, are not normally a serious threat to large areas as is the case in western states where dry weather conditions and large expanses of timber increase the likelihood and extent of the impact of a wildfire. The North Carolina Division of Forest Resources has the responsibility for protecting state and privately owned forest land from wildfires. The program is managed on a cooperative basis with all one hundred counties in the State. The State fire program emphasizes fire prevention efforts; pre-suppression activities (including extensive training of personnel); aggressive suppression efforts on all wildfires; and law enforcement follow-up.

Winter Storms and Freezes

Local governments also look to the State and to private utility companies for leadership in dealing with winter storms/freezes. The typical effects of snow and ice accumulation - loss of electrical power, phone, and cable service and treacherous road conditions - can be only minimally addressed at the local level. (The exceptions would be larger cities which have more snow/ice removal equipment and manpower and governments that own the local electrical distribution system.)

Community Goals

Wilson County and the seven participating municipalities developed a list of hazard mitigation goals and objectives that set the framework for development of hazard mitigation actions:

Mitigation Actions

New mitigation actions for Wilson County are outlined in Table ES-2. These are the mitigation actions that are to be undertaken by the County as the lead agency with the municipalities serving in a supporting role where appropriate. Separate mitigation action tables for the seven municipalities follow as Tables ES-3 through ES-9.

Goal #1 Protect the public health, safety and welfare by increasing public awareness of hazards and by encouraging collective and individual responsibility for mitigating hazard risks.

Objective 1.1 The County and municipalities will engage in activities and practices that will help mitigate the impacts of natural hazards.

Objective 1.2 The County and municipalities will implement a public awareness campaign to educate citizens of the possible hazards associated with locating in floodplains and of measures that can be taken to lessen impacts of future floods.

Objective 1.3 The County and municipalities will work to ensure that emergency services are adequate to protect public health and safety.

- **Goal #2** Improve technical capability to respond to hazards and to improve the effectiveness of hazard mitigation actions.
 - **Objective 2.1** The County and municipalities will work together to develop policies that limit the provision of public services (water and sewer) to proposed new development in flood hazard areas.
 - **Objective 2.2** Wilson County and the participating municipalities will continue to evaluate participation in the Community Rating System to help monitor hazard mitigation efforts and to improve the affordability of flood insurance for citizens.

- **Goal #3** Enhance existing or create new policies and ordinances that will help reduce the damaging effects of natural hazards.
 - **Objective 3.1** The County and municipalities will continue to ensure future development occurs in such a way as to protect wetlands, floodplains, and other natural features that serve to reduce flood hazard susceptibility.
 - **Objective 3.2** The County and municipalities will enforce National Flood Insurance Program (NFIP) development standards and also study additional methods that would help prevent increases in flood velocities and levels that endanger both people and property. (Some of the municipalities will be adopted flood damage prevention regulations for the first time on November 1, 2004 as required by NCEM/FEMA.)
- **Goal #4** Protect the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation actions.
- **Objective 4.1** The County and municipalities will continue to restrict development in known or predictable pathways of natural hazards such as in identified floodplains. Where hazard locations cannot be predicted, as in the case of hurricane force winds, the County and municipalities will continue to ensure that new structures are built to be as resilient as possible to the impacts of a natural hazard.
- **Objective 4.2** While recognizing that property owners have the constitutional right to put land to an economically viable use, the County and participating municipalities will honor this right while working to limit development in areas that may cause emergency workers to put lives at risk to rescue someone from a structure knowingly built in a hazardous area.

Table ES-1: 2004-2009 City of Wilson Hazard Mitigation Plan - Mitigation Action Plan Accomplishments

Action	Description
Hazard Advisory Council	In 2005, the activity was underway for the Advisory Committee to convene beginning in Jan 06. In 05, problems arose due to staff changes and the abundance of other pressing projects. This continued in 06 as they experienced continued staff turn-over and other pressing projects. It was decided that the 04 HMUP needed revising and to include more standard operating procedures. They decided to reassemble in early 07 to discuss and plan for needed updates including the FEMA mandated 5-yr update.
Improve Community Shelters	In 05, shelters were increased from 3 to all 7 schools and 8 additional ones as well. 5 of these can be used for long term use (2 to 5 days), the others function as back-up temporary shelter for hazardous events. In 06, Red Cross shelters were reorganized and redistributed to 2 newest schools in community which can sustain heavier wind loads, if extra schools are needed, the other 5 can be placed online as needed but aren't as favorable. Red Cross's capability of providing meals 3 days/week for 7-10 days has increased from 4,000 to 36,000 meals/day. 7 feeding stations can be setup within County, 4 in the City, within 6 hours after wind dies down.
Improve Coordination and Communication	In 2005, a video covering hurricane preparedness entitled "Before, During, and After the Storm" was developed and aired frequently on the City public channel. The local newspaper featured articles on Wilson vulnerabilities which included improvement to make the City more resistant and hurricane-prepared. The website features the HMP and links to the County's EM programs. Website also includes "My Neighborhood" with flood plain maps and parcel level to determine extent of floodplain on resident's property. In 2006, many shows were broadcast on Channel 8 about city work that show what has been done to limit flooding, streets to avoid, how fire personnel were trained more efficiently, and a fire safety program. Fire Dept to receive specialized equipment to allow EMS, Fire, Police, etc to cross-communicate. City recently adopted the National Incident Management System to train emergency personnel to communicate more effectively and allows for future funding and participation of all emergency-response related personnel. Information on Spanish populations addressing emergency preparedness and shelter locations has been developed and includes advertisements on the radio and TV as well as flash cards with symbols for key words used by staff and by volunteers. In 2007, City of Wilson has a TV station on site; Channel 8 improved programming available in emergency, including more on fire safety. Mass dialing fully operational. Fiber optic network was installed with 1st customers coming online during first quarter of 2008. Fire Department still using video conferencing and received grant to purchase digital sign to be used for amber alerts, weather alerts, emergency information, etc.
Keep Utilities On	Water Treatment- back up generator added Gas Division - Rebuilt/replaced 3 regulator station to better system pressure, removed 2 potentially dangerous regulators, installed residential meters in locations away from ignition sources, updated GIS with new, replaced, or abandoned gas main and service lines. Water Treatment- Installation of 4 auxiliary power generator sets and off-site pumping stations.

	2006	Electrical Infrastructure - Generator for City Hall Complex, substation signage has been installed that is bilingual and displays GPS location as well as emergency numbers, OMS System was implemented. Water and Sewer Infrastructure - Portable regenerator was rebuilt that can be used to power one of 2 remaining pumping stations (20 stations and 18 have permanent generators). A new administration and lab facility at the Waste Water Treatment plant has eliminated nuisance flooding at the old facility with its leaking roof. Solid waste handling stations were moved out of flood hazard areas. A revised Spill Prevention and Control Plan were developed for WWTP to address hazardous spills in 05. Three generators have been installed at the water and sewer plant with only one possibly still needed. Fire Department - 10 personnel trained in swift water rescue and one will soon reach State Rescue Technician Instructor level and be able to train the others. Main fire station has been further protected from flooding with the build-out retrofit in 03 when drainage was rerouted via an added swell.
Keep Utilities On	2007	Police Department - Computer operations have been moved out of the basement. Servers are still there.Communication Operations - City's fiber optics now serve major City facilities and are being expanded to cover corporations and service providers within the community.Electrical Infrastructure - Completed installation of a spare transformer bank is Substation #6. Refurbished and upgraded the City's existing mobile transformer. Fiber optic network has been run to all substations to allow for communication. SCADA will be completed next year. New substation under construction is located outside of flood hazard area. Generator at Operations Center has been replaced with a larger one to support the fiber optic network.Gas Department- Isolation tracing available on all vehicles.
		Wastewater Infrastructure- WWTP has been flood-proofed using steel plats and sandbags. Fire Department- Department conducted the unified command and control exercise for all emergency support personnel (Homeland Security requirement). Mobile GIS is available in all vehicles. Police Department- All staff fit tested for gas masks. Servers in basement have been installed in rack mounts to alleviate flooding problems.
Improve Floodplain and Drainage Systems	50% of the buying ou (City's ce	bod Plain Ordinance approved to further restrict development in Floodplain Fringe by limiting construction to only be area in the floodplain fringe that is further away from the floodway. Stormwater Division looked at possibility of at some commercial properties prone to flooding, no funding yet. RFP for Hominy Swamp Drainage Basin Plan ntral drainage basin) awarded to Jewell Engineering who will finish plan by Dec. 05. Will address critical flooding and make recommendations for addressing blockage and other restrictions that cause flooding.
Improve Floodplain and Drainage Systems	Hominy S overall dr and Quee throughou	ormwater Infrastructure Swamp Stormwater Master Plan was completed and identified 19 alternative activities and projects to improve the ainage system. Ditch cleaning continues with three major projects (Creek Side Subdivision, Sherwood Forest, en Street area) assisted in reducing nuisance flooding problems. State mandated Water Quality Detention Ponds at the City jurisdiction are inspected on a regular basis and with aggressive enforcement owners are required to cessary repairs where deficiencies are discovered.

	Neuse River Basin City staff considering additional buffering requirements that will increase protection areas along streams.
Improve Floodplain and Drainage Systems	Stormwater Infrastructure Outfall improvements made in the Riverbirch Subdivision along Saddle Run Road to improve drainage. Implementer measures to assure pond compliance. Beginning to keep track of all conservation easements. Set up a Pre/Post Severe Weather Plan which sets up zones for Public Service Departments to remove obstructions from storm drainage systems prior to storm events. Four storm drainage improvement projects completed. Ditch cleaning projects completed off Aycock St in 2 locations and at intersection of Dogwood Lane and Forest Hills Rd. Performing drainage surveys for the worst areas of localized flooding.

Source: City of Wilson

Table ES-2: Wilson County Multi-Jurisdictional Hazard Mitigation Plan - Hazard Mitigation Actions

Action #	Wilson County Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Prevent	ive Actions						
P-1	Updated DFIRM floodplain maps were effective in 2004.	Flood	1.1 3.1 3.2	High	NCDENR	P&I	Completed and maps adopted 2004
P-2	Evaluate benefits of participation in the Community Rating System (CRS).	Flood	2.2	Moderate	Local	P&I	2010-2011
P-3	Add drainage as an issue to be discussed during Technical Review Committee review of proposed development plans.	Flood	3.1	High	Local	P&I	2009
P-4	Continue to support the NC Sedimentation Control Commission efforts to ensure erosion and sedimentation control measures are properly installed and maintained during construction.	Flood	3.1	High	Local State	P&I	Ongoing
P-5	 Comprehensive Land Use Plan completed Update 1990 Wilson Growth Plan: Develop more specific land use categories and clearly delineate areas that are unsuitable for growth and development; Develop an open space plan; target key properties for an open space acquisition program. (Use the properties being purchased through the FEMA Buyout Program as initial plan components.); Adopt a more limited policy on the types of uses allowed within flood hazard areas; and Establish a policy that not only encourages but also states a preference for clustering of residential lot development to preserve flood hazard 	All	1.1 2.1 3.1	Moderate	Local	P&I	Completed 2008

	Wilson County Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion
	areas from development.		7144100004				Date
P-6	The extension of public services into flood hazard areas and other environmentally sensitive area will be addressed through the Conservation Overlay within the UDO.	Flood	4.1	Moderate	Local	P&I	2009 through UDO

Action #	Wilson County Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
	 Consider raising the minimum finished floor elevation to more than 2' above base flood elevation (BFE) to provide more flood protection for new or substantially improved structures. (CRS 430). 						
P-9	Inventory existing lots and structures within flood hazard areas to establish baseline data regarding current state of development within flood hazard areas.	Flood	1.1 3.2 4.2	Moderate	Local	P&I	2009
P-10	Acquire destroyed or substantially damaged properties and relocate households (voluntary program) (CRS 520/420).	Flood	1.1 4.2	High	FEMA NCEM	P&I	As needed
P-11	 Building Inspections: Continue to require and maintain FEMA elevation certificates for all permits for new buildings or improvements to buildings on lots including any portion of the 100-year floodplain (CRS 310). Count building improvements cumulatively (maintain permit history so when cumulative improvements equal 50% of building value, (substantial improvement) building must be brought up to flood protection standards for new construction) with a goal to eventually have all flood hazard endangered buildings brought up to flood protection standards (CRS 430). Continue to maintain elevation certificates on all new construction and substantial improvements; make available to the public (CRS 310). Ensure that manufactured homes are installed and secured properly. Ensure doorframes are securely anchored; especially double doors that can be very dangerous in high winds. 	Flood		High	Local	P&I	Ongoing

Action #	Wilson County Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
P-12	Establish coordinating committee to ensure that all parties responsible for stormwater management communicate to ensure maximum cooperation in developing and maintaining stormwater drainage systems within the County.	Flood	1.1	High	Local	P&I	2009
P-13	Establish and maintain coordinated debris inspection program.	Flood	1.1	Moderate	Local	P&I NRCS EM SW	2009
P-14	Emergency water connects have been put in place that can connect Wilson County with Rocky Mount, Kenly, Edgecombe County, Johnston County, Wayne County	Droughts	1.1	High	Local	Utilities	Completed 2007 & Ongoing
P-15	Include provisions within the UDO Wilson County will be adopting a Conservation Overlay District which will require a Minimum 40,000 (forty-thousand) square foot lot size. This District will cover much of the western part of Wilson County around Buckhorn Reservoir. Requiring larger lots in this area will reduce the impact on flood prone areas.)	Floods	11	High	Local	P&I	2009
Emerger	ncy Services						
ES-1	Ensure adequate evacuation time in case of major hazard event.	All	1.1 1.3	High	Local	EM	Ongoing
ES-2	Evaluate areas with limited evacuation capacity and pursue methods for improving capacity.	All	1.1 1.3	High	Local	EM	Completed
ES-3	Protect new critical facilities by flood-proofing or locating outside 500-year floodplain (CRS 430).	Flood	4.1 4.2	Moderate	Local	EM	Completed
ES-4	Improve hazard warning and response plan – warning and evacuating persons out of flood prone or isolated areas, controlling vehicles on evacuation routes, evacuation of hazard materials (CRS 610).	All	1.3	High	Local	EM	Completed

ES-5	Establish program for evaluation and improvements of critical services and facilities.	All	1.3	High	Local	EM NCDOT Utilities Hospitals	2004-2005
ES-6	Evaluate flood or access problems for critical facilities; develop recommendations for protecting critical facilities. Identify alternate command posts.	All	1.3	High	Local	EM	2004-2005
ES-7	Improve Hazard Warning and Response Plan – warning and evacuating critical facilities, getting persons out of flood prone or isolated areas, controlling vehicles on evacuation routes, evacuation of hazard materials (CRS 610).	All	1.3	High	Local	EM	2004-2005
ES-8	Water line expansion Phase I and Phase II of the Wilson County water system with fire hydrants being placed in the rural areas water is much more accessible when needed to fight a wild fire.)	All	1.3	High	Local	Utilities	2005
Public In	formation Activities						
PI-1	Advise/assist property owners in retrofitting homes and businesses. (Retrofitting is defined as any modification to an existing building or yard to protect the property from flood damage.)	Flood	1.1 1.2	High	Local	P&I	Ongoing
PI-2	Establish and maintain information on retrofitting techniques at the Planning and Inspections Department and also at the public library. Publicize through citizen news bulletins or newsletters. (CRS 330/350/360).	Flood	1.1 1.2	High	Local	P&I	2009
PI-3	Updated flood maps reflect new subdivisions, changes in corporate limits, and all FIRM data; publicize availability of maps and keep record of service (CRS 320).	Flood	1.1 1.2 2.3	High	Local	GIS	Continuous
PI-4	Add information on hazard awareness to the County website and link with town websites as available.	All	1.1 1.2	High	Local	GIS	Completed

Source: Wilson County.

Table ES-3: Town of Black Creek Mitigation Actions – Ordered by Action

Action #	Town of Black Creek Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Black Creek P-1	Review Floodplain Prevention Ordinance and amend as necessary to be in compliance with the NC state model ordinance	Flood	1.1 1.2	High	Local	тс	Completed
Black Creek P-2	Review and update the Zoning and Subdivision Ordinances.	All	1.1	Moderate	Local	тс	Completed
Black Creek P-3	Identify and Inspect Public Drainage Outlets.	Flood	3.1	Moderate	Local	TS	Completed
Black Creek P-4	Maintain Floodplain Maps for review with new subdivisions.	Flood	1.3	Moderate	Local	ZA PB	Completed
Black Creek P-5	The Town of Black Creek plans to work in conjunction with Wilson County to produce and maintain a digital zoning map.	All	2.3	Moderate	County	Wilson County	Completed
Black Creek P-6	In conjunction with Wilson County, improve inspection and enforcement of inspection guidelines for mobile homes.	All	1.2	Moderate	Local	ZA	Completed
Black Creek P-7	Inventory and maintain list of critical facilities	All	1.1	Moderate	Local	тс	Completed
Black Creek P-8	Update Water Treatment System for Well #5	All	1.1	Moderate	State Federal	TS	2010
Black Creek P-9	Analyze potential point sources for infrastructure leaks within sewer system	All	1.1	Moderate	State Federal	TS	2009-2010
Black Creek P-10	Install emergency generators for Town Hall, Fire Dept., and Police Station	All	1.3	Moderate	Local	TS TC	2009-2010

Abbreviations: PB – Planning Board, ZA – Zoning Administrator, TS – Town Superintendent, and TC – Town Commissioners Source: Town of Black Creek

Table ES-4: Town of Elm City Mitigation Actions – Ordered by Action

Action #	Town of Elm City Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Elm City P-1	Update Zoning Ordinance regulations to more fully address development standards that would reduce stormwater runoff and the potential for flooding.	All	3.2	Moderate	Local	PB TB	Completed
Elm City P-2	Strengthen the Public Water and Sewer Ordinance by adding language that specifically prohibits extending public services and utilities into the flood hazard or other environmentally sensitive areas to discourage growth.	Flood	3.1	Moderate	Local	PB TB	Completed
Elm City P-3	Periodically update Flood Damage Prevention Ordinance.	Flood	1.2	High	Local	PB TB	Ongoing
Elm City P-4	Install generators at water lift stations	All	1.1	Moderate	Local	PU	2013
Elm City NR-1	The Town will review and update policies on water shortage to be more prepared in the event of a drought.	All	1.2	Moderate	Local	TC TB PU	2009-2010
Elm City PI-1	Work with Wilson County to produce and maintain digital zoning and land use maps.	All	2.3	Moderate	County	Wilson County	Ongoing

Abbreviations: PB – Planning Board; TB – Town Board; PW – Public Works; PU – Public Utilities. Source: Town of Elm City

Table ES-5: Town of Lucama Mitigation Actions – Ordered by Action

Action #	Town of Lucama Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Lucama P-1	Adopted a Flood Damage Prevention Ordinance.	Flood	3.1	High	Local	PB TB	Completed Oct. 2004
Lucama P-2	Town of Lucama will develop and revise as necessary a Water Shortage Response Plan – adopted 2003.	All	1.1	Low	Local	ТВ	Ongoing
Lucama P-3	Electric Emergency Load Reduction Plan and Procedures – 2008	All	1.1	High	Local	PU	Completed 2008
Lucama ES-1	The Town of Lucama will continue to review and revise as necessary the Emergency Response Plan.	All	1.1 1.3	Low	Local	ТВ	Ongoing
Lucama ES-2	The Town of Lucama will consider how to improve security around public water wells, pumps stations, and the water treatment facility.	All	1.1	High	Local	PU	2013-2014
Lucama PI-1	Work in conjunction with Wilson County to produce and maintain digital zoning and land use maps.	All	1.1	Moderate	Local County	TB Wilson County	Ongoing

Abbreviations: PB – Planning Board; TB – Town Board; PU – Public Utilities. Source: Town of Lucama

	Table ES-6: Town of Saratoga Mitigation Actions – Ordered by Action #										
Action #	Town of Saratoga Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date				
Saratoga P-1	Adopt a Flood Damage Prevention Ordinance.	Flood	3.1	High	Local	PB TB					
Saratoga P-2	Update Zoning Ordinance regulations to more fully address development standards that would reduce stormwater runoff and the potential for flooding.	All	3.2	Moderate	Local	PB TB	2010				
Saratoga PI-1	Work in conjunction with Wilson County to produce and maintain digital zoning and land use maps.	All	1.1	Moderate	Local County	TB Wilson County	Ongoing				

Abbreviations: PB – Planning Board; TB – Town Board. Source: Town of Saratoga

Action #	Town of Sims Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Sims P-1	Update the Land Use Plan.	All	1.1.	Moderate	Local	ТВ	2010
Sims P-2	Strengthen the Public Water and Sewer Ordinance by adding language that specifically prohibits extending public services and utilities into flood hazard or other environmental sensitive areas to discourage growth.	Flood	2.1	High	Local	ТВ	2009
Sims P-3	Update Zoning and Subdivision Ordinances.	All	1.1	Moderate	Local	ТВ	2012
Sims P-4	Adopted a Flood Damage Prevention Ordinance.	Flood	1.1	High	Local	ТВ	Completed 2003
Sims NR-1	Consider implementing the NC well- head-protection program.	All	1.1	Moderate	Local	ТВ	2010
Sims ES-1	Continue to revise the Water Shortage Policy as needed.	All	1.1 1.3	Moderate	Local	ТВ	Ongoing
Sims PI-1	Work in conjunction with Wilson County to produce and maintain digital zoning and land use maps.	All	1.1.	Moderate	Local	TB Wilson County	Ongoing
Sims PI-2	Outreach Project on Hazard Mitigation Strategy Education – Send out flyers and information to the public to educate in case of emergencies.	All	1.1 1.2	High	Local	ТВ	Ongoing
Sims PI-3	Make available educational material on natural hazards and place in Town Hall.	All	1.1 1.2	Moderate	Local	ТВ	Ongoing

Abbreviations: TB – Town Board. Source: Town of Sims

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Table ES-8: Town of Stantonsburg Mitigation Actions – Ordered by Action #									
Action #	Town of Stantonsburg Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date		
Stantonsburg P-1	Update and amend the Zoning Ordinance (1985).	All	1.1	Moderate	Local	PB TC	2010-2011		
Stantonsburg P-2	Update and amend the Flood Damage Prevention Ordinance and Flood Maps.	Flood	1.1	High	Local	TM TC	2009		
Stantonsburg P-3	Strengthen the Water and Sewer Ordinance by adding language to specifically prohibit extending public services and utilities into flood hazard areas and other environmentally sensitive areas to discourage growth.	Flood	3.1 1.3 2.1	Moderate	Local	TM TC	2011-2012		
Stantonsburg NR-1	Amend the Water Shortage Response Plan as necessary (adopted April 2004).	Drought	1.1	High	Local	TM TC	Ongoing		
Stantonsburg NR-2	Update and amend the Wellhead Protection Policy to correspond to the new flood maps.	All	2.1	Moderate	Local	TM TC	2010-2011		
Stantonsburg ES-1	Install emergency back-up generators at the Wastewater Treatment Plant and at lift stations in the event of extended power outages.	All	1.3	High	Local State Federal	TC	2010-2011		
Stantonsburg ES-2	Install alarm systems and telemetry on water treatment plant, booster station, water tanks, and existing wells in the event of extended power outages or other failures.	All	1.3	High	Local County	TC Wilson County	2009-2010		
Stantonsburg PI-1	Work in conjunction with Wilson County to produce and maintain digital zoning and land use maps. – Planning Board, TC – Town Council, TM – Town Ma	All	1.1	Moderate	Local County	TB Wilson County	Ongoing		

Abbreviations: PB – Planning Board, TC – Town Council, TM – Town Manager. Source: Town of Stantonsburg

Table ES-9: City of Wilson Mitigation Actions – Ordered by Action

Action #	Wilson City Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party ¹	Target Completion Date			
Preventative	Actions			•	•					
Wilson P-1	Consider the installation of additional monitoring systems for flood waters.	Flood	1.1	Low	Local	PS SW	2014			
Wilson P-2	Consider requiring retention facilities to hold storm water to allow seepage on site.	All	1.1	Moderate	Local	PS SW	Ongoing			
Wilson P-3	Consider detention facilities to store storm water during peak runoff to be released at off-peak times.	All	1.1	Moderate	Local	PS SW	Ongoing			
Wilson P-4	The City currently has a rating of 7 (ten-highest, one-lowest) under the Community Rating System (CRS). Consideration should be given for more stringent activities.	All	2.2 3.2	Moderate	Local	PD SW	Ongoing			
Wilson P-5	Increasing the flood proofing protection for nonresidential buildings to at least 2 and 1/2 feet of "free board", residential development should also be considered.	Flood	1.1	High	State	PD SW	Completed			
Wilson P-6	New substation and point-of- delivery completed.	All	1.1	High	Local	PS	Completed 2008			
Wilson P-7	Another substation is under construction. Larger transformer installed in Sub 4 for added capacity.	All	2.1 3.1	High	Local	PS	2010			
Wilson P-8	Installed a new pressure regulator station on Lake Wilson Rd. to bolster our 95# & 45# gas systems	All	2.1 3.1	High	Local	PS	Completed 2008			
Wilson	Recalibrated our Gas Modeling	All	1.1	High	Local	PS	Completed 2008			

Action #	Wilson City Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party ¹	Target Completion Date
P-9	software to better manage outages and problems on the gas system						
Wilson P-10	Enhance our GIS capabilities	All	1.1	High	Local	PS	Ongoing
Wilson P-11	Purchased new rugged laptops in division's first responder vehicles that contain GIS and customer related information on them	All	1.1	High	Local	WE	Completed 2008
Wilson P-12	Continue to replace aging steel gas facilities with polyethylene that has a longer life span	All	1.1	High	Local	WE	2009-2013
Wilson P-13	Continue Cathodic Protection and Leakage survey's to better understand our buried facilities so that trouble spots are recognized before more serious problems occur.	All	1,1	Moderate	Local	WE	2009-2013
Wilson P-14	Install rugged laptops on all of the division's vehicles.	All	1.1	Moderate	Local	WE	2009-2013
Wilson P-15	Utilize updated DFIRM Floodplain data when creating mapping.	Flood	1.1	High	Local State	PD SW	Completed 2004
Wilson P-16	Continue coordination from NCEM and FEMA to secure resources for hazard mitigation activities.	All	1.1	Moderate	Local State Federal	PD	Ongoing
Wilson P-17	Encourage builders to incorporate mitigative measures for disaster resiliency during construction.	All High Wind	1,1	Moderate	Local State	CS	Ongoing
Wilson P-18	Continue to enforce the NC State Building Code, incorporating hazard mitigation measures as applicable.	All	1.1	Moderate	Local State	CS	Ongoing
Wilson P-19	Seek funds to buyout repetitive loss properties.	Flood	3.1	Moderate	Local State Federal	PD	Ongoing

Action #	Wilson City Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party ¹	Target Completion Date
Wilson PP-1	Consider wind requirements for all public buildings, as applicable by the NC State Building Code.	Flood	3.1	Moderate	State Local	PD CS	Ongoing
Wilson PP-2	Continue to evaluate the relocation/elevation/flood proofing needs of all critical public facilities.	Flood	4.2	Moderate	Local Federal	PD LD	Ongoing
Wilson PP-3	The State and Federal funded "buyout" program for Hurricane Floyd was completed within the time limits established by the State. (353 homes units or 173 properties were purchased and families relocated with the Buyout funds.)	Flood	4.1 4.2	High	Local State Federal	PS SW	Completed
Wilson PP-4	As additional grants become available the City should continue to apply for acquisition funds to purchase other properties flooded.	Flood	4.1	Moderate	Local	PD SW	Ongoing
Wilson PP-5	Continue to seek funds, to provide new developments to replace areas subject to flooding and relocate families.	Flood	4.1 4.2	High	Local State Federal	PD SW	Ongoing
Wilson PP-6	Consider construction moratoriums following a flood related disaster	Flood	1.1	Moderate	Local	PD CS	Ongoing
Emergency	Services Actions						
Wilson ES-1	Minimize placing new critical public facilities within the floodplain, unless they are designed to withstand flood damage.	Flood	3.1 4.2	Moderate	Local Federal	PD LD	Ongoing
Wilson ES-2	Review the Emergency Management Operational Plan on an annual basis and revise as needed.	All	1.1	Moderate	Local	FD	Ongoing
	ource Actions						
Wilson NR-1	Continue to implement the program to "take back" major drainage areas or streams through	All	4.1	Moderate	Local State	PS SW	Ongoing

Action #	Wilson City Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party ¹	Target Completion Date
	acquisition or easements and maintain them as public facilities.						
Wilson NR-2	Continue improving and maintaining streams throughout the community.	All	1.1	Moderate	Local	PS SW	Ongoing
Wilson NR-3	Wherever possible preserve natural wetlands, especially along streams, through acquisition or conservation easements.	All	1.1	High	Local	PS SW	Completed
Wilson NR-4	As part of the Hominy Swamp Watershed Management Plan expansion of wetland protection is recommended through the acquisition of existing wetland areas along sections of the stream.	All	1.1	Moderate	Local	PS SW	Ongoing
Wilson NR-5	Continue to work with State and Federal agencies to more aggressively clean and clear out the streams to improve drainage and water flows.	All	1.1	Moderate	Local State Federal	PS SW	Ongoing
Wilson NR-6	Where feasible and practical address drainage problems in the streams or drainage facilities within the City's ETJ.	All	1.1	Moderate	Local	PS SW	Ongoing
Wilson NR-7	Consider a floodplain/stream modeling program that allows evaluation of flooding potential along streams based upon new developments that occur upstream.	Flood	1.1	Low	Local Grant	SW	2014
Wilson NR-8 Public Inforn	Through the Storm Water Management Program insure that the stream channels are property maintained to reduce or minimize nuisance flooding.	Flood	1.1	Moderate	Local	SW	Ongoing

Action #	Wilson City Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party ¹	Target Completion Date
Wilson PI-1	Due to the flooding related to Hurricane Floyd, signs were installed to notify public of the water height.	Flood	1.2	High	Local	PS	Completed
Wilson PI-2	Continue to update the City's website with Hazard Mitigation Updates and progress reports.	All	1.2	High	Local	IT PS	Completed 2005
Wilson PI-3	Continue to inform citizens of funding opportunities for potential flood buy-outs.	Flood	1.2	Moderate	Local	PD SW	Ongoing

Abbreviations: (PS) Public Services, (SW) Stormwater, (PD) Planning and Development Services, (CS) Construction Standards, (LD) Land Development, (MS), Management Services, Wilson Electric (WE), Fire Department (FD) and (SH) Safety and Health. Source: City of Wilson