

SECTION 9

MITIGATION ACTION PLAN

This section includes the listing of the mitigation actions proposed by the participating jurisdictions in Wake County. It consists of the following two subsections:

- ◆ 9.1 Overview
- ◆ 9.2 Mitigation Action Plans

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.

9.1 OVERVIEW

As described in the previous section, the Mitigation Action Plan, or MAP, provides a functional plan of action for each jurisdiction. It is designed to achieve the mitigation goals established in Section 8: *Mitigation Strategy* and will be maintained on a regular basis according to the plan maintenance procedures established in Section 10: *Plan Maintenance*.

Each proposed mitigation action has been identified as an effective measure (policy or project) to reduce hazard risk for Wake County. Each action is listed in the MAP in conjunction with background information such as hazard(s) addressed and relative priority. Other information provided in the MAP includes potential funding sources to implement the action should funding be required (not all proposed actions are contingent upon funding). Most importantly, implementation mechanisms are provided for each action, including the designation of a lead agency or department responsible for carrying the action out as well as a timeframe for its completion. These implementation mechanisms ensure that the Wake County Multi-Jurisdictional Hazard Mitigation Plan remains a functional document that can be monitored for progress over time. The proposed actions are not listed in priority order, though each has been assigned a priority level of “high,” “moderate,” or “low” as described below and in Section 8 (page 8.2).

The Mitigation Action Plan is organized by mitigation strategy category (Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, or Public Education and Awareness). The following are the key elements described in the Mitigation Action Plan:

- ◆ Hazard(s) Addressed—Hazard which the action addresses.
- ◆ Relative Priority—High, moderate, or low priority as assigned by the jurisdiction.
- ◆ Lead Agency/Department—Department responsible for undertaking the action.
- ◆ Potential Funding Sources—Local, State, or Federal sources of funds are noted here, where applicable.
- ◆ Implementation Schedule—Date by which the action the action should be completed. More information is provided when possible.

- ◆ Implementation Status (2014)—Indication of completion, progress, deferment, or no change since the previous plan. If the action is new, that will be noted here.

9.2 MITIGATION ACTION PLANS

The mitigation actions proposed by each of the participating jurisdictions are listed in 13 individual MAPs on the following pages. **Table 9.1** shows the location of each jurisdiction’s MAP within this section as well as the number of mitigation actions proposed by each jurisdiction.

TABLE 9.1: INDIVIDUAL MAP LOCATIONS

Location	Page	Number of Mitigation Actions
Wake County	9:3	47
Apex	9:10	81
Cary	9:22	52
Fuquay-Varina	9:32	42
Garner	9:42	68
Holly Springs	9:55	64
Knightdale	9:77	39
Morrisville	9:85	18
Raleigh	9:91	44
Rolesville	9:103	35
Wake Forest	9:109	53
Wendell	9:118	37
Zebulon	9:124	36

Wake County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Continue to prohibit the placement of any new residential or commercial structures or the introduction of fill in the floodway or floodway fringe.	Flood	High	Wake Planning and Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-2	Initiate hydrologic and hydraulic modeling of the stormwater system to provide a representation of watersheds and predict the water quantity response of streams and rivers to land use conditions and storm events.	Flood, Drought, Riverine Erosion	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-3	Apply 100-foot buffers to perennial streams in water supply watersheds, and study the possibility of increasing the protection of other watercourses and drainageways in Wake County.	Flood	Moderate	Wake Planning and Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-4	Apply 100-foot wide undisturbed stream buffers to the lower Swift Creek and study it for Little River watershed.	Flood	Moderate	Wake Planning and Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-5	Study the possibility of establishing either a stormwater utility or some other permanent dedicated funding source for stormwater and floodplain programs.	Flood, Drought, Riverine Erosion	High	N/A	Local	Deleted	Stormwater Management Task Force did not recommend this action. Board of Commissioners agreed.
P-6	Initiate NPDES Phase II Stormwater Program as required.	Flood, Drought, Riverine Erosion	High	Wake Environmental Services	Local	Deleted	Wake County does not have an MS4 System therefore a permit is not required.
P-7	Collaborate on NPDES Phase II minimum measures where local governments on a voluntary basis can request that Wake County provide staff and resources related to any and all functions required by Phase II stormwater rules.	Flood, Drought, Riverine Erosion	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-8	Create development regulations to encourage use of low impact development site planning principles to help control stormwater volume impacts.	Flood, Drought, Riverine Erosion, High Winds	Moderate	Wake Planning and Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-9	Study the possibility of revising the zoning ordinance to include impervious surface standards that help minimize impervious surface coverage in priority and healthy watersheds. Wake County opted for use of NRCS Curve Number approach, which is superior to impervious surface standards.	Flood, Drought, Riverine Erosion	Moderate	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-10	Implement post-construction stormwater runoff controls to address additional runoff volume from new development and issues related to flooding created from higher peak runoff rates.	Flood, Drought, Riverine Erosion	Moderate	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-11	Study the possibility of charging offset fees for development that exceeds set impervious surface ratios in priority watersheds.	Flood, Drought, Riverine Erosion	Moderate	N/A	Local	Deleted	Stormwater Management Task Force did not recommend this action. Board of Commissioners agreed.
P-12	Ensure sensitive site design through reviewing development plans, meeting with customers, and site inspections.	Flood, Drought, Riverine Erosion	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-13	Update the design manual for erosion control to include the newest, most effective site design technologies. Train staff on new techniques.	Flood, Drought, Riverine Erosion	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
P-14	Enhance erosion and sedimentation control programs, primarily through enhanced enforcement.	Flood, Drought, Riverine Erosion	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-15	Continue the stream monitoring program and seek to maximize efforts through coordination with other organizations.	Flood, Drought, Riverine Erosion	High	Wake Planning, Environmental Services, Municipalities, DENR-WQ, USGS, Ecosystems Enhancement Program	Local, Regional, State, Federal	Complete	This action was completed and will be removed from the next plan update.
P-16	Develop an Environmental Monitoring Program to evaluate current water quality conditions and monitor impacts of growth and development on the health and condition of water resources in the future.	Flood, Drought, Riverine Erosion	High	Wake Planning, Environmental Services, Municipalities, DENR-WQ, USGS, Ecosystems Enhancement Program	Local, Regional, State, Federal	2017-2019	In progress. Wake County is partnering with UNRBA to do ongoing stream monitoring in the Falls Lake watershed for the next 3-5 years.
P-17	Maintain an open space prioritization and acquisition program to ensure maximum success with limited funds.	Flood, Drought	High	Wake Land Acquisition Review Committee, Open Space and Parks Advisory Committee, Contractors, Municipalities, TJCOG, Trust for Public Lands, and Triangle Land Conservancy	Local, Regional, State, Federal	Complete	This action was completed and will be removed from the next plan update.
P-18	Partner with other governmental units and other interested parties to jointly identify and acquire 30,000 acres of open space lands.	Flood, Drought	High	Municipalities, State of NC, NC State University, Trust for Public Lands, and Triangle Land Conservancy	Local, Private, State, Federal	2019, with long term goal of Approx. 25-30 years	The County has purchased approximately 5,000 acres since the program's inception. It will take several decades as indicated to complete.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-19	Oversee completion of planned reclaimed water projects per the County's approved Community Improvement Program (CIP).	Drought	Moderate	Raleigh, Wake County	Local	2019-2021	Completed several reclaimed water projects in RTP and others directly related to County facilities. More projects are in the works going forward.
P-20	Perform demonstration projects for rainwater harvesting, nutrient reductions and runoff reductions and water conservation.	Drought	Moderate	Wake Soil and Water Conservation	Local	Complete	This action was completed and will be removed from the next plan update.
P-21	Develop enhanced information about water saving devices.	Drought	Moderate	Wake Soil and Water Conservation	Local	Complete	This action was completed and will be removed from the next plan update.
Property Protection							
PP-1	Continue to utilize Federal and State grants to address structures in floodplains: acquire and remove from the floodplain; or renovate, retrofit and/or elevate structures flooded after a President or State declared disaster.	Flood	Moderate	Wake Environmental Services, Finance-Risk Management, and General Services Administration	Federal, State, Local	Delete	The County is not actively seeking grants to address floodplain structures. The County will pursue it if an when the circumstances arise.
PP-2	Continue to provide service to inform and advise citizens of the actions they may take to improve drainage, halt erosion, and to relocate, renovate or retrofit structures being flooded.	Flood, Drought, Riverine Erosion	Moderate	Wake Environmental Services	Local, Private	Complete	This action was completed and will be removed from the next plan update.
Natural Resource Protection							
NRP-1	Continue local program to enforce Erosion and Sedimentation Control Standards. Cross train ES employees in other disciplines to improve efficiency.	Flood, Drought, Riverine Erosion	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
NRP-2	Employ a variety of regulated Best Management Practices (BMPs) in the Stormwater Program to reduce peak flows, provide groundwater recharge, etc. One-year and (sometimes) 10-year storm event design required. 100-year spillway capacity always required.	Flood, Drought, Riverine Erosion	Moderate	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-3	Consider regulations to regulate clear-cutting to help control erosion from construction sites.	Flood, Drought, Riverine Erosion	Moderate	Wake Environmental Services, Planning, and Community Services	Local	Complete	This action was completed and will be removed from the next plan update.
NRP-4	Maintain the County's cluster and open space subdivision regulations and recreation land dedication ordinance to enhance conservation efforts.	All	High	Wake Environmental Services, Planning, and Community Services	Local	Complete	This action was completed and will be removed from the next plan update.
NRP-5	Study the possibility of developing a conservation subdivision, or open space subdivision, ordinance to help preserve significant natural features.	All	Moderate	Wake Environmental Services, Planning, and Community Services	Local	Complete	This action was completed and will be removed from the next plan update.
Structural Projects							
SP-1	Inspection and maintenance of Crabtree Creek flood control structures.	Flood	High	Wake General Services Administration	Local	Complete	This action was completed and will be removed from the next plan update.
SP-2	Channel Maintenance - Possibility of private property owner assistance program to be investigated as part of stormwater utility feasibility study.	Flood, Riverine Erosion	High	Wake Environmental Services	Local	Delete	Stormwater Management Task Force did not recommend this action. Board of Commissioners agreed.
SP-3	Pursue stream restoration projects and will look for ways to expand the program through partnerships with various entities.	Flood, Riverine Erosion	High	Wake Environmental Services, Community Services, DENR-WQ Ecosystems Enhancement Program, USACE	Local, Regional, State, Federal	Complete	This action was completed and will be removed from the next plan update.
Emergency Services							
ES-1	Identify priority County facilities and provide access to one main entrance. Restore life safety and building systems as needed.	All	High	Wake General Services Administration	Local, FEMA	Complete	This action was completed and will be removed from the next plan update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-2	Develop a Business Continuity Plan, the primary document housing all disaster related plans and procedures.	All	High	Wake Emergency Management	Local	Complete	This action was completed and will be removed from the next plan update.
ES-3	Oversee completion of planned equipment replacements/upgrades for 800 MGHZ emergency communications systems, EMS facilities, and fire/rescue facilities per the approved capital improvement program.	All	High	Wake Facilities Design and Construction	Local	December 2018	In progress. The 800 MGHZ replacements are underway and scheduled for completion in 2018.
Public Education and Awareness							
PEA-1	Provide monitoring and enforcement of Wake County flood hazard regulations.	Flood	Moderate	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
PEA-2	Provide flood zone information through call-in or e-mail program to any inquirer. County requires showing flood zone information on all plats recorded in County planning jurisdiction.	Flood	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
PEA-3	Maintain a web site to answer citizen questions about flood hazards, flood safety, availability of flood insurance, stormwater regulations, and other information.	Flood	Moderate	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
PEA-4	Partner with Raleigh to use the "Communicator" application that will use GIS to develop automated call lists to warn residents of impending floods	Flood	High	Emergency Management & GIS	Local	Complete	This action was completed and will be removed from the next plan update.
PEA-5	Maintain Environmental Network Call Center. Citizens may report flooding problems, pollution issues, erosion problems, infrastructure damage, littering, etc.	All	Moderate	Wake Environmental Services	Local	2019	This call center is in place, but a review and update of the system will be likely in the coming years.
PEA-6	Adopt updates to floodplain maps. Staff will review maps and identify all structures in floodplains and notify property owners of the risks and availability of flood insurance. List forwarded to Emergency Management.	Flood	High	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-7	Maintain flood elevation certificates.	Flood	Moderate	Wake Environmental Services and Community Services	Local	Complete	This action was completed and will be removed from the next plan update.
PEA-8	Update flood hazard maps to reflect new subdivisions, changes in corporate limits, and any new DFIRM data.	Flood	Moderate	Wake GIS	Local	Complete	This action was completed and will be removed from the next plan update.
PEA-9	Continue to use the State’s Residential Property Disclosure Statement that includes check off on whether or not the property being offered for sale is within a Federally-designated floodplain.	Flood	Moderate	State of NC, Realtors	State	Delete	The county is not responsible for this action, but the state and realtors are ensuring that this is taking place.
PEA-10	Continue to make flood protection educational materials available.	Flood	Moderate	Wake Environmental Services	Local	Complete	This action was completed and will be removed from the next plan update.
PEA-11	Provide environmental education classes for development community and residents using Clearwater Contractor Education Program as model.	Flood	High	Wake Environmental Services, Community Services, and Municipalities	Local, State	Delete	Insufficient staff resources to accomplish this action.
PEA-12	Consider a countywide stormwater call center to improve response time to customers, provide an educational component, and allow stormwater staff to devote more time to solving problems	Flood	High	Wake Environmental Services, Community Services, and Municipalities	Local, State	Delete	Insufficient staff resources to accomplish this action.
PEA-13	Develop common public education materials and programs to inform the public on stormwater issues and convince them to change their behaviors accordingly.	Flood, Drought, Riverine Erosion	Moderate	Wake County Soil and Water Conservation	Local, State	Complete	This action was completed and will be removed from the next plan update.

Town of Apex Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Adoption of the Comprehensive Land Use Plan that will provide a 20 year plan for the town and include goals and policies for public safety and hazard mitigation.	All	High	Apex Planning	Local	Completed	Completed 2004. In addition, a Western Area Plan was approved in 2008. The Land Use Map was updated in 2013. This action will be removed from the next update as a capability.
P-2	Land Use Plan (long-range): As town grows towards Jordan Lake, lower density and cluster development. The HMP was reviewed with considerations made for density and cluster development while drafting the plan updates in 2004, 2008, and 2013.	All	Moderate	Apex Planning	Local	Completed	Completed 2004, 2008, and 2013. In 2013, the Land Use Map 2030 increased the density of some areas adjacent to Army Corp Land. (Apex is determining how many acres increased). In addition, the Land Use Map removed land south of Hwy 1 (Apex GIS is determining how many acres). This action will be removed from the next update as a capability.
P-3	UDO: Continue to provide stream and creek buffers, and floodplain and wetland protection. HMP considerations incorporated into the UDO process.	Flood	High	Apex Planning	Local	Completed	UDO continues to provide stream and creek buffers, floodplain, and wetland protection. This action will be removed from the next update as a capability.
P-4	UDO: Resource Conservation Areas (RCA) – Continue to protect floodplains, streams, and creeks. HMP considerations incorporated into the UDO process.	Flood	High	Apex Planning	Local	Completed	UDO RCA continues to protect floodplains, streams, and creeks. This action will be removed from the next update as a capability.
P-5	UDO: Subdivision Standards – Continue to provide protection for residential areas by not allowing residential lots in the floodplain. HMP considerations incorporated into the UDO process.	Flood	High	Apex Planning	Local	Completed	UDO (adopted in 2000) does not allow residential lots within floodplain. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-6	Building Code – Ensure buildings are minimum 2’ above base flood elevation. HMP considerations incorporated into the UDO process.	Flood	High	Apex Construction Management	Local	Completed	Building Code, ensure buildings are minimum 2 feet above base flood elevation. This action will be removed from the next update as a capability.
P-7	UDO: Flood Damage Prevention Overlay District – Continue to restrict and prohibit uses which are dangerous to health, safety, and property. Uses vulnerable to floods are protected. HMP considerations incorporated into the UDO process. HMP considerations incorporated into the UDO process.	Flood	High	Apex Planning, Apex Construction Management (Floodplain Manager)	Local	Completed	UDO Section 6. Flood Damage Prevention Overlay District. This action will be removed from the next update as a capability.
P-8	UDO: Flood Damage Prevention – Ensure control is provided for filling, grading and dredging within floodplains by working with necessary State and Federal Agencies. HMP considerations incorporated into the UDO process.	Flood	Moderate	Apex Planning, Apex Construction Management	Local	Completed	Flood Damage Prevention Ordinance. This action will be removed from the next update as a capability.
P-9	UDO: Flood Damage Prevention – prevent or regulate construction of flood barriers. HMP considerations incorporated into the UDO process.	Flood	Moderate	Apex Construction Management	Local	Completed	Flood Damage Prevention Ordinance. This action will be removed from the next update as a capability.
P-10	UDO: Watershed Protection Overlay District – Ensure riparian buffers are provided for perennial and intermittent streams, lakes, and ponds. HMP considerations incorporated into the UDO process.	Flood	High	Apex Planning, Apex Public Works and Utilities	Local	Completed	Watershed Protection Overlay District. This action will be removed from the next update as a capability.
P-11	UDO 7.2.1 - Streets – Ensure road standards to be maintained in disaster preparation for possible use as evacuation routes. Amendments to the Transportation Plan included street standards and interconnectivity for possible use in routing. HMP considerations incorporated into the UDO process.	All	Moderate	Apex Planning	Local	Completed	UDO and Transportation Plan. Road standards and interconnectivity. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-12	Provide adequate water supply through storage and interconnection with other public water systems.	Drought	Moderate	Apex Public Works and Utilities	Local	Completed	The town works with surrounding municipalities and the county to ensure an adequate water supply. This action will be removed from the next update as a capability.
P-13	Provide adequate electric utility service through tree trimming contracts, the use of six circuits, and the construction of a new electrical substation.	All	Moderate	Apex Public Works and Utilities	Local	Completed	Public Works has its own Tree Trimming crew with Arborists. This action will be removed from the next update as a capability.
P-14	Provide backup power for all critical public facilities (wastewater treatment plant, sewer pump stations, Public Works and Utilities building, and other critical public buildings).	All	Moderate	Apex Public Works and Utilities	Local	Completed	Critical public buildings have backup power. This action will be removed from the next update as a capability.
P-15	Maintain major town transportation routes through snow and ice removal contracts and equipment.	Severe Winter Storms	Moderate	Apex Public Works and Utilities	Local	Completed	Public Works included a salt/sand container in 2012. This action will be removed from the next update as a capability.
P-16	Require Engineered Storm Water Control Structures.	Flood	Moderate	Apex Public Works and Utilities	Local	Completed	The town continues to evaluate locations for stormwater control structures and has installed some of these structures in the past. This action will be removed from the next update as a capability.
P-17	Back-up information pertaining to Town government in case of an emergency.	All	Moderate	Apex Information Technology	Local	Completed	Town of Apex on a regular basis backs-up information pertaining to Town government in case of an emergency. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-18	Apex Transportation Plan – Continue to address disaster preparedness (evacuation) through road interconnectivity, paved roads, and widening of roads.	All	Moderate	Apex Planning	Local	Completed	Amendments to the Transportation Plan included street standards and interconnectivity for possible use in routing. This action will be removed from the next update as a capability.
P-19	Review and update as necessary UDO Flood Damage Prevention Overlay District regulations to increase protection from flood hazard events.	Flood	Moderate	Apex Planning	Local	Completed	The UDO Flood Damage Prevention Overlay District needs to be reviewed and updated regularly. This action will be removed from the next update as a capability.
P-20	Develop adverse Weather Plan Map for Public Works Work Crew.	All	High	Apex Construction Management	Local	Completed	The Adverse Weather Plan Map has been developed. This action will be removed from the next update as a capability.
P-21	Adopt FEMA’s new FIRM.	Flood	High	Apex Planning	Federal	Deleted	Deleted. Item is redundant and P-26 suffices.
P-22	Adopted additional Title 44 Federal Regulations to the Unified Development Ordinance.	Flood	High	Apex Planning	Federal	Completed	Completed 2006. Adopted additional Title 44 Federal Regulations to the UDO. This action will be removed from the next update as a capability.
P-23	Adopted additional Chapter 143 NC General Statutes regarding floodway regulation.	Flood	High	Apex Construction Management	State	Completed	Completed. Adopted additional Chapter 143 NC General Statutes to the UDO. This action will be removed from the next update as a capability.
P-24	Implemented new Floodplain Development Permit.	Flood	High	Apex Construction Management	Local	Completed	Completed. A new floodplain development permit has been implemented for use in the town. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-25	Maintain Continuing Education Training for maintenance of Floodplain Management Certificate (16 hours).	Flood	High	Apex Construction Management	Local	Completed	Completed every 2 years by Floodplain Manager. This action will be removed from the next update as a capability.
P-26	FEMA Flood Map updates and Flood Plain Manager Certification.	Flood	High	Apex Construction Management	Local	Deleted	Delete. Similar to P-21 and P-25
P-27	Develop FEMA Debris Management Plan.	All	High	Apex Public Works and Utilities	Local	Completed	The Debris Management Plan has been developed so this action is completed. This action will be removed from the next update as a capability.
P-28	Allow fill but no structures within the Floodplain.	Flood	High	Apex Planning, Apex Construction Management (Floodplain Manager)	Local	Completed	Revised April 2012. Changed from "proposed no construction tilling within the Floodplain." This action will be removed from the next update as a capability.
P-29	Created new Transportation Planner position.	All	High	Apex Planning	Local	Completed	Completed 2006. Apex plans on retaining a Transportation Planner. This action will be removed from the next update as a capability.
P-30	Coordinate Transportation Planning with CAMPO.	All	High	Apex Planning	Local	Completed	The town coordinates regularly with CAMPO on Transportation Planning. This action will be removed from the next update as a capability.
P-31	Revise and update regulatory floodplain maps.	Flood	Moderate	Apex Construction Management (Floodplain Manager)	Local	2017	New action.
P-32	Develop an environmental committee that meets regularly to discuss issues and recommend projects.	Flood, Drought, Erosion, Wildfire, Landslide	Moderate	Apex Public Works (Environmental Program Director)	Local	2015	New action.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-33	Form a citizen plan implementation steering committee to monitor progress on local mitigation actions. Include a mix of representatives from neighborhoods, local businesses, and local government.	Flood	Moderate	Apex Public Works (Environmental Program Director)	Local	5 years	New action.
P-34	Encourage the use of Low Impact Development techniques.	Flood	Low	Apex Public Works (Environmental Program Director)	Local	5 years	New action.
P-35	Encourage the use of porous pavement, vegetative buffers, and islands in large parking areas.	Flood	Low	Apex Public Works (Environmental Program Director)	Local	5 years	New action.
P-36	Encourage the use of permeable driveways and surfaces to reduce runoff and promote groundwater recharge.	Drought, Flood	Low	Apex Public Works (Environmental Program Director)	Local	5 years	New action.
P-37	Use impact fees to help fund public projects to mitigate impacts of land development.	Flood	Moderate	Apex Public Works (Environmental Program Director)	Local	5 years	New action.
P-38	UDO update: incorporate proper specials selection, planting, and maintenance practices into landscape ordinance.	All	Moderate	Apex Planning	Local	2017	New action.
P-39	Obtain local data including tax parcels, critical facility locations, and other information for use in risk analysis.	All	Moderate	Apex GIS, Apex Construction Management	Local	2015	New action.
P-40	Incorporate a GIS system/management plan for tracking permitting and land use patterns.	All	Moderate	Apex GIS	Local	2018	New action.
Property Protection							
PP-1							
Natural Resource Protection							
NRP-1	UDO 6.1.12 – Continue to require engineered stormwater controls including stream and wetland protection. HMP considerations incorporated into the UDO process.	Flood	Moderate	Apex Planning, Apex Public Works	Local	Completed	UDO continues to require engineered stormwater controls. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-2	UDO 6.2 - Flood Damage Prevention Overlay District - continue to prohibit any development in floodway to protect floodplains and wetlands. HMP considerations incorporated into the UDO process.	Flood	Moderate	Apex Planning, Apex Construction Management	Local	Completed	UDO continues to prohibit any development in the floodway. This action will be removed from the next update as a capability.
NRP-3	Phase 1 C Beaver Creek Greenway – Whitehall to Jaycee.	All	High	Apex Parks and Recreation	Local	Completed	Phase 1 C Beaver Creek Greenway was completed in 2009. This action will be removed from the next update as a capability.
NRP-4	Phase II Haddon Hall Greenway.	All	High	Apex Parks and Recreation	Local	Completed	Phase II Haddon Hall Greenway was completed in 2009. This action will be removed from the next update as a capability.
NRP-5	Phase I Apex Nature Park.	All	High	Apex Parks and Recreation	Local	Completed	Phase I Apex Nature Park was completed in 2011. This action will be removed from the next update as a capability.
NRP-6	Phase II Nature Park.	All	High	Apex Parks and Recreation	Local	Completed	Phase II Nature Park was completed in 2012. This action will be removed from the next update as a capability.
NRP-7	Extend Beaver Creek Greenway (Kelly Road to Nature Park).	All	High	Apex Parks and Recreation	Local	Completed	Completed and Revised. Green infrastructure program to link, manage, and expand existing parks, preserves, and greenways. This action will be removed from the next update as a capability.
NRP-8	Water Shortage Response Plan.	All	High	Apex Public Works and Utilities	Local	Completed	The Water Shortage Response Plan is in place and active. This action will be removed from the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-9	Adoption of NC Division of Water Quality Best Management Practices Manual for NPDES Phase II Community.	All	High	Apex Public Works and Utilities	Local, State	Completed	Completed. The town has adopted NC DWQ Best Management Practices for Phase II Community. This action will be removed from the next update as a capability.
NRP-10	Adopt erosion and sedimentation control regulations for construction.	Flood, Erosion	Moderate	Apex Construction Management (Floodplain Manager)	Local	2019	New action.
NRP-11	Use stream restoration to ensure adequate drainage and diversion of stormwater.	Flood	Moderate	Apex Public Works (Environmental Program Director)	Local	2019	New action.
NRP-12	Middle Creek Greenway (Miramonte to Holly Springs).	All	Moderate	Apex Parks and Recreation	Local	2019	New action. Green infrastructure program to link, manage, and expand existing parks, preserves, and greenways.
NRP-13	White Oak Creek Greenway.	All	Moderate	Apex Parks and Recreation	Local	2020	New action. Green infrastructure program to link, manage, and expand existing parks, preserves, and greenways.
Structural Projects							
SP-1							
Emergency Services							
ES-1	Ongoing provision of emergency assistance as needed.	All	High	Apex Police, Apex EMS, Apex Fire	Local	Completed	Emergency assistance is provided for as needed. This action will be removed from the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-2	Emergency Operations Command Post Center – established when natural hazard imminent. If needed, Center coordinates evacuations, sheltering, staging for equipment, manpower, and needed supplies. Equipment includes internet access, telephone, wireless communications, radio and backup supplied by emergency batteries and/or generators.	All	High	Apex Fire, Apex EMS, Apex Police	Local	Completed	Emergency Operations Center has been established in the past when events occur. This will continue to occur in the future. This action will be removed from the next update as a capability.
ES-3	Ensure hazard warning methods include television, radio, internet and, if needed, emergency vehicles loud speaker systems.	All	Moderate	Apex Town Manager’s Office	Local	Completed	Hazard warning methods are varied and include many different types of warning systems. These systems are in place. This action will be removed from the next update as a capability.
ES-4	Maintain open lines of communication between all branches of emergency response personnel.	All	Moderate	Apex Fire, Apex EMS	Local	Completed	Open lines of communication between the emergency response personnel are in place. This action will be removed from the next update as a capability.
ES-5	Prepare for emergency situations – weather station, local weather warning system, and emergency management.	All	Moderate	Apex Fire	Local	Completed	Preparations for emergency situations are undertaken prior to an emergency utilizing a number of sources such as weather stations and emergency management. This action will be removed from the next update as a capability.
ES-6	Standard Operating Guidelines – collection of procedures to be followed during emergencies.	All	High	Apex Fire	Local	Completed	Updated Standard Operating Guidelines are in place that explain how the town should act during an emergency situation. This action will be removed from the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-7	Maintain contact information for local businesses in case of an emergency.	All	High	Apex Fire	Local	Completed	A list of local businesses has been developed. This action will be removed from the next update as a capability.
ES-8	Health and safety maintenance – provide assistance with security and post storm clean-up.	All	High	Apex Police	Local	Completed	During an event, assistance with security and post storm cleanup is provided by the police department. This action will be removed from the next update.
ES-9	Post disaster response – building inspections.	All	Moderate	Apex Construction Management	Local	Completed	After a disaster event, building inspections are carried out to assess damage. This action will be removed from the next update.
ES-10	Town of Apex Fire Department will merge with Apex EMS (formerly private).	All	High	Apex Fire, Apex EMS	Local	Deleted	Deleted. Not completed due to budget concern.
ES-11	Chemical Fire Action Report available on CD.	Fire	High	Apex Fire	Local	Completed	The Chemical Fire Action Report was completed in 2006. This action will be removed from the next update as a capability.
ES-12	Construct Fire Station #4.	Fire	High	Apex Fire	Local	Completed	Fire Station #4 was completed in 2009. This action will be removed from the next update as a capability.
ES-13	Construct Fire Stations #5 and #6.	Fire	Moderate	Apex Fire	Local	2017	Locations for #5 and #6 are still pending so this action is still a work in progress.
ES-14	State Fire Marshall Office Grant – providing smoke detectors to low-income residents.	Fire	High	Apex Fire	State	Completed	The grant has been received and smoke detectors are being distributed. This action will be removed from the next update as a capability.
ES-15	Acquire additional 4 ambulances.	All	High	Apex EMS	Local	Deleted	Not completed due to budget and not merging with Apex EMS.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-16	Community Emergency Response Team (CERT) training available through Fire Department.	All	Moderate	Apex Fire	Local	Completed	CERT training remains available through the Fire Department. This action will be removed from the next update as a capability.
Public Education and Awareness							
PEA-1	Town website - public access, emergency information and contact numbers, link to hurricane and Harris nuclear evacuation route maps and safety information. Revise the Emergency Information Page. Add Ready Wake link.	All	Moderate	Apex Information Public Officer	Local	2015	The town website has been updated with information for public use, but that information should be revised.
PEA-2	Hazard Disclosure – Geographic information systems (GIS) map maintained to increase public awareness of known hazard locations.	Flood	Moderate	Apex Planning	Local	Completed	A GIS map and database for the public is maintained. This action will be removed from the next update as a capability.
PEA-3	Planned park land purchase – nature park to include trails and environmental education center.	Flood	High	Apex Parks and Recreation	Local Wake County	Completed	Completed. Nature Park in operation. This action will be removed from the next update as a capability.
PEA-4	Public Library – Maintain and update hazard information accessible to the public.	All	Moderate	Apex Planning	Local	Within 30 days after HMP update is adopted by Town Council	Through 2014, the town has maintained up to date information on hazards in its public library and will update public library with information on hazards after the plan has been approved and adopted.
PEA-5	Continue to provide flood maps for public use with staff continuing to be available for public assistance.	Flood	High	Apex Planning, Apex Construction Management (Floodplain Manager)	Local	Completed	A flood map for the public is maintained. This action will be removed from the next update as a capability.
PEA-6	Bi-annual update of the Town’s website for broken links.	All	Moderate	Apex Information Public Officer	Local	Completed	The town reviews its website for broken links on a bi-annual basis. This action will be removed from the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-7	National Night Out – Hurricane/Disaster Awareness Open House.	Hurricane	High	Apex Planning, Apex Fire, Apex EMS	Local	Deleted	Deleted. Incorporated under action PEA-17.
PEA-8	Include FEMA flood map link on the Town Website on the Engineering page.	Flood	High	Apex Construction Management (Information Public Officer)	Local	2015	New action.
PEA-9	Town website and utility billing announcing National Preparedness Month (September) reminding citizens to have a plan and be prepared.	All	Moderate	Apex Information Public Officer	Local	2015	New action.
PEA-10	Include Environment Education Station and classroom at Nature Park.	All	Moderate	Apex Parks and Recreation	Local	2019	New action.
PEA-11	Post warning signage at local parks for lightning.	Lightning	Moderate	Apex Parks and Recreation	Local	2019	New action.

Town of Cary Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Town stormwater staff will continue to maintain current level of control of development in flood hazard areas with ordinance amendments as necessary.	Flood	High	Cary Water Resources	Local	Completed	Amend LDO as needed to maintain or exceed mandated requirements. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
P-2	Town will continue to participate in the NFIP thereby keeping current with all applicable NFIP flood hazard regulations.	Flood	High	Cary Water Resources	Local	Completed	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
P-3	Town’s Comprehensive Plan- The Town has an existing comprehensive plan which includes land use, parks and recreation, open space, transportation, utilities, and environment.	All	High	Cary Planning	Local	Completed 1996 Regular updates on-going	Town is in process of preparing new Community Plan incorporating all elements of existing Comp Plan. Adoption expected in 2015.
P-4	Land Use Plan An existing tool which guides future development based on available services and existing site features/resources to ensure that future development is meeting the overall vision of the Town while ensuring the safety of the citizens.	All	High	Cary Planning	Local	Adoption 1996 Regular updates through area plans	Town is in process of preparing new Community Plan incorporating all elements of existing Comp Plan. Adoption expected in 2015.
P-5	Southwest Area Plan – Lower densities of development are planned as the Town grows toward Jordan Lake.	All	High	Cary Planning	Local	Adoption in 2004 Perpetual implementation through standards in LDO	Continued implementation through review and approval of development plans. Represented in Capability Assessment. Will remove from Mitigation actions in next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-6	Northwest Area Plan - Plan requires 200 foot buffers adjacent to the four major streams in the area west of NC 55 and north of Morrisville Parkway heading westward to Jordan Lake.	All	High	Cary Planning	Local	Adoption in 2003 Perpetual implementation through standards in LDO	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
P-7	Open Space Preservation – Existing Open Space Plan identifies and evaluates various land and open space resources throughout the ETJ and Urban Services Areas. The plan is used by Town staff to identify properties to be protected from development.	Flood	High	Cary Planning	Local	Adoption in 2002 Perpetual implementation through standards in LDO	Town Is in process of preparing new Community Plan incorporating all elements of existing Comp Plan. Adoption expected in 2015.
P-8	Building Code – In accordance with North Carolina General Statute, Chapter 160A, Article 19 the Town of Cary administers a Building Inspections program to uphold/enforce the 2009 NC State Building Code. These regulations provide guidance on design criteria for flood, roof snow load, wind design, wind speed, seismic design, eathering, frost line depth, termite infestation and decay.	All	High	Cary Inspections and Permits	Local	Completed	Continued implementation through review and approval of permits. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
P-9	Land Development Ordinance- The Town has an existing LDO which regulates development to ensure public health, safety and welfare of Cary residents and businesses.	All	High	Cary Planning	Local	Completed	Continued implementation through review and approval of development plans, permits and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-10	Provide adequate water supply through storage and interconnection with other public water systems.	Drought	High	Cary Public Works, Utilities and Water Resources	Local	Completed	See also ES-13. Drought or other conditions have not warranted activation of Response Plan. However Plan is in place if needed. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
P-11	Transportation Plan - Addresses disaster preparedness (evacuation) through road interconnectivity, pavement practices, signal preemption, etc.	All	High	Cary Facilities Design & Transportation Services, and Planning	Local	Completed implementation through standards in LDO	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
P-12	Floodplain Development Regulations – Ordinance restricts and/or prohibits uses which are dangerous to health, safety, and property due to water or erosion hazards which result in damaging increases in erosion or in flood heights or velocities.	Flood	High	Cary Water Resources	Local	Completed implementation through standards in LDO	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
P-13	Amend Town of Cary Land Development Ordinance and Zoning map as needed to begin implementation of the Chatham-Cary Joint Land Use Plan (if adopted).	All	High	Cary Planning	Local	Completed	Completed. Joint Plan adopted June 28, 2012.
P-14	Amend Code of Ordinances to restrict use of combustible landscape materials.	Wildfire	High	Cary Fire	Local	Completed	Deleted. Was previously completed in 2010.
P-15	If grant application is approved by FEMA, the Town will conduct a detailed study to determine the risk level of each residential structure in the identified floodplain areas and take actions to reduce the risk to those properties.	Flood	High	Cary Water Resources	Federal Grant	2018	Not implemented. Town applied for grant and was turned down. The town would like to implement if funding becomes available.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Natural Resource Protection							
NRP-1	Local Sedimentation and Erosion Control program approved by the NCDENR. Three staff members dedicated to this program.	Flood	High	Cary Water Resources	Local	Completed	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
NRP-2	Town requires installation of Best Management Practices to help with water quality and natural resource protection.	Flood	High	Cary Water Resources	Local	Completed	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
NRP-3	Forestry Practices - Existing program which requires a timbering plan within Town limits and ETJ.	Flood	Moderate	Cary Water Resources	Local	Completed	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
NRP-4	Wetlands Protection - Existing riparian, open space, and flood damage prevention ordinances restrict development along streams and in the floodplain thus restricting development in much of the Town's wetland areas.	Flood	Moderate	Cary Water Resources	Local	Completed, implementation through standards in LDO	Continued implementation through review and approval of development plans and public projects. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
NRP-5	Prepare a Stormwater Master Plan to help guide future stormwater management policies and procedures.	Flood	High	Cary Water Resources	Local	Completed	Completed. Adopted July 2013.
Structural Projects							
SP-1	Replace culverts on Holloway Street.	Flood	High	Cary Water Resources	Local	Completed	Completed. Project completed in early 2014.
SP-2	Replace culverts on Willow Street.	Flood	High	Cary Water Resources	Local	2015	In progress. Design in process. Schedule affected by workload.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
SP-3	Replace culverts on Woodland Drive.	Flood	High	Cary Water Resources	Local	2014	In progress. Bidding in process. Construction to begin July 2014. Schedule affected by workload.
SP-4	Replace culverts on Summer Lakes Drive	Flood	High	Cary Water Resources	Local	2015	New action. Design in process.
SP-5	Replace culverts on Kilarney Drive	Flood	High	Cary Water Resources	Local	2015	New action. Design in process.
SP-6	Replace culverts on Yubinaranda Circle	Flood	High	Cary Water Resources	Local	2015	New action. Design in process.
Emergency Services							
ES-1	Provide and enhance technical rescue capabilities throughout the Town.	All	High	Cary Fire	Local	2016	Funding approved for additional boat and structural collapse equipment
ES-2	Provide after-action report of emergency response to severe weather events in order to improve planning for future disasters.	All	High	Cary Fire, Water Resources, and Facilities Design & Transportation Services	Local	Perpetual- Post Event	A report is prepared and a debriefing meeting conducted after each significant event. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-3	Maintain a standard operating guideline to direct operational planning prior to anticipated weather emergencies.	All	High	Cary Fire	Local	Deleted	Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-4	Establish a relationship/partnership with the Renaissance Computing Institute (RENCI) to create a web-based tool capable of providing real-time flood data to emergency managers and historic data for future emergency response planning.	All	Low	Cary Fire and Technology Services	Local	2020	No action at this time. Low Priority due to limited staff and budget resources and limited applicability and risk. The town will attempt to develop in the coming years.
ES-5	Provide urban search and rescue services for structural collapse and similar emergencies.	All	High	Cary Fire	Local, State	Deleted	Represented in Capability Assessment. Will remove from Mitigation actions in next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-6	Utilize visual warning barricades for vehicular and pedestrian traffic to block properties, roadways, etc. for the safety of the general public.	All	Moderate	Cary Public Works	Local	Completed	Public works staff utilized barricades whenever needed, typically a few times per year following heavy rain events, to ensure public safety. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-7	Continue to conduct disaster tabletop exercise program.	All	Low	Cary Fire, Public Works, and Utilities	Local	Completed	Mock hurricane and snowstorm events are conducted annually to prepare for hurricane season and winter. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-8	Critical Security Post Coverage – certain fixed sites identified for coverage during disasters – water treatment, municipal complex, wastewater treatment, etc. Vulnerable businesses and offices identified and contacted in event of rising waters.	All	Low	Cary Police	Local	Completed I	Businesses contacted during approximately 8-10 severe weather events during plan period. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-9	Emergency response plans are designed for officers to be assigned for security purposes until owners can take over the responsibility of securing premises.	All	Low	Cary Police	Local	Completed	Properties secured during approximately 5-7 severe weather events during plan period. Represented in Capability Assessment. Will remove from Mitigation actions in next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-10	Counseling – Police psychologist and Critical Incident Stress Debriefing Team training to provide debriefing sessions for personnel.	All	Low	Cary Police	Local	Completed	Post-incident counseling and training provided for approximately 10 employees after critical incidents. Support continued with through post-traumatic support group. Incident represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-11	Utilize Water Emergency Response Plan in accordance with EPA mandate with wastewater emergency plan developed voluntarily.	All	High	Cary Utilities	Local	Completed	All required permits maintained with strong record of compliance Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-12	Maintain emergency electrical generators at all critical public utilities facilities.	All	High	Cary Utilities	Local	Completed	50 or more generators maintained at key locations. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-13	Maintain Water Shortage Response Plan in accordance with State Emergency Management Division and Division of Water Resources requirements for IBT certificate.	All	High	Cary Water Resources	Local	Completed	Drought or other conditions have not warranted activation of Response Plan. However Plan is in place if needed. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-14	Continue to develop emergency mutual aid water supply program.	Drought	Moderate	Cary Water Resources	Local, Regional	Completed	Mutual Aid Agreements now exist with Raleigh, Durham, and OWASA. Water was provided to Durham on short term basis in order to address water line break. Represented in Capability Assessment. Will remove from Mitigation actions in next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-15	Maintain and enforce Water Conservation Policy and Program.	Drought	Moderate	Cary Water Resources	Local	Completed	See items ES-14 and PI-7. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
ES-16	Establish a relationship/partnership with the Renaissance Computing Institute (RENCI) to create a web-based tool capable of providing real-time data to emergency managers and historic data for future emergency response planning.	All	High	Cary Technology Services	Local	Deleted	Merged with ES-4.
Public Education and Awareness							
PEA-1	Town provides technical assistance to citizens that request help with drainage concerns.	Flood	Moderate	Cary Water Resources	Local	Completed	Assistance provided to approx 150-200 citizens per year. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
PEA-2	Stormwater staff provides the public with flood zone information via the telephone, e-mail or walk-in.	Flood	High	Cary Water Resources	Local	Completed	Information provided to approximately 50 callers or visitors per year. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
PEA-3	The Town provides environmental education on website by supplying information on flood hazards, development regulations, etc.	Flood	Moderate	Cary Water Resources	Local	Completed	Website is maintained and updated as new information becomes available. Represented in Capability Assessment. Will remove from Mitigation actions in next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-4	The Town maintains a “stormwater hotline” for citizens to report flooding problems during non-working hours, weekends and holidays.	Flood	High	Cary Water Resources and Public Works	Local	Completed	Town has consistently responded to and tracked calls regarding flooding problems. Number of calls varies greatly from month to month depending and number, type and severity of weather events. (Example, 22 in Feb 2014, 69 in April 2014) Represented in Capability Assessment. Will remove from Mitigation actions in next update.
PEA-5	Town provides education programs at environmental education centers, e.g. Hemlock Bluffs.	Flood, Drought	Moderate	Cary Parks, Recreation and Cultural Resources	Local	Deleted	Action Item to be removed. Specific programs related to flood and drought not provided due to competing PCRC priorities. Education and information provided in other contexts through water Resources
PEA-6	Town provides flood maps for public use with staff available for public assistance.	Flood	High	Cary Water Resources	Local	Completed	Information provided to approximately 50 callers or visitors per year. Represented in Capability Assessment. Will remove from Mitigation actions in next update.
PEA-7	Town provides water conservation educational programs at Spring Days and Lazy Days Events held in the spring and late summer of every year.	All	Low	Cary Water Resources	Local	Completed	Information provided annually at Lazy Daze and Spring Daze festivals, and mailed each spring to all water customers at launch of summer campaign. Represented in Capability Assessment. Will remove from Mitigation actions in next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-8	Provide public outreach to owners of high-hazard dams and downstream property owners. Provide information to clarify notification process prior to water release.	Flood	High	Cary Water Resources and Public Works	Local	Completed	Completed. Issue adequately addressed by Land Quality Section (LQS) of NCDENR, which requires owners to have EAP, inspects dams, and provides inspection report to owners annually or biennially. Will remove this item from Mitigation actions in next update
PEA-9	Establish a relationship/partnership with the Renaissance Computing Institute (RENCI) to create a web-based tool that will allow users to view information about the risks of natural hazards, including floods, fires, dam breaks and winter storms, in specific areas of Wake County.	All	High	Cary Technology Services	Local	Deleted	Duplication – covered in ES-4
PEA-10	Regularly review and improve means of communicating and sharing information with citizens by utilizing emerging technologies where appropriate and cost effective.	All	High	All Town Departments	Local	Completed	Town now provides information via facebook, Youtube, and twitter, news release feed, email subscription service, local cable TV and apps related to transit service and sustainability.

Town of Fuquay-Varina Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Update the Land Use Plan (LUP) update including identification of environmentally sensitive areas for evaluation and protection during development review process.	All, Flood	Moderate	Fuquay-Varina Planning	Local	December 2015 - 2016	The Town will work toward a cycle of LUP area updates within the period of this HMP. The last officially adopted update was in 2005. Lack of staffing and budget constraints have prevented update further than minor updates related to zoning changes.
P-2	Enforce 50' riparian stream buffers in Neuse and Cape Fear River basins to restrict development in these protected areas.	Flood	High	Fuquay-Varina Planning	Local	Completed	The Town's riparian buffer requirements in Cape Fear River Basin are additional to those required by the State for only the Neuse River Basin. Requirements enforced through new development applications since adoption in 2006. This action will be removed from the plan at the next update.
P-3	Update the Community Transportation Plan including evaluation of stream-crossings to reduce impacts on streams, flood plains and wetlands.	Flood	Moderate	Fuquay-Varina Planning	Local	December 2015	Update existing plan, adopted in 2007, to reflect changes and new developments in facilities, transportation, infrastructure, and environmental features. Overall update of the CTP is tied to the Southwest Area Study (SWAS) which was delayed for over 2 years, with adoption postponed until mid-2014.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-4	Update land Development Ordinance (LDO) to incentivize and encourage floodplains, wetlands, riparian buffers to be maintained as open space.	Flood	Moderate	Fuquay-Varina Planning and Engineering	Local	June 2015	In progress. Adoption of LDO is anticipated in June 2015, with efforts referenced to be in addition to current standards. Town Board decision on process and approval to proceed with development of the LDO delayed ability to begin.
P-5	Add standards to LDO to reduce impervious surface areas as part of landscaping requirements to reduce storm water volume and concentration in nonresidential development.	Flood	Moderate	Fuquay-Varina Planning and Engineering	Local	June 2015	In progress. Adoption of LDO is anticipated in June 2015, with efforts referenced to be in addition to current standards that will minimize impervious surface and utilize alternative construction materials to reduce runoff and impact on water courses. Action hinges on LDO.
P-6	Develop Stormwater Management Plan based on NPDES Phase II Stormwater Requirements.	Flood	High	Fuquay-Varina Engineering	Local	February 2014	Completed. Adoption of Stormwater Management Plan in February 2014 to assist in regulation of runoff control and reduced effects of hazards.
P-7	Require pre and post construction certification for residential lot development within 10 feet of Wake County Flood Hazard Soils.	Flood	Moderate	Fuquay-Varina Planning	Local	Completed	Completed. The Town requires this information with building permit for single family homes in residential developments to provide that new structures are not encroaching into environmentally sensitive areas. This action will be removed from the plan at the next update.
P-8	Enforce Wake County Flood Hazard Soils Policy, following and utilizing flood study standards.	Flood	Moderate	Fuquay-Varina Planning	Local	2015	New action. The Town enforces an adopted policy related to protection of Wake County Flood Hazard Soils.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-9	Annually calculate acreage of flood prone property preserved as open space.	Flood	Moderate	Fuquay-Varina Planning	Local	2015, Annual review and update	The Town continues to see development of subdivisions utilizing open space and thereby preserving flood prone areas. The Town is also working to connect park facilities to minimize disturbance of land, and provide connections to schools via cooperation with Wake County Board of Education.
P-10	Adopt a Land Development Ordinance that will improve the review process, standards and results to reduce the impact of development on the natural environment.	Flood	Moderate	Fuquay-Varina Planning	Local	June 2015	In progress. Anticipated adoption of LDO is June 2015. See action related to adoption of LDO.
P-11	Implement standard for each buildable lot to have a minimum percentage of buildable area outside floodplains, wetlands, riparian buffers as part of the plan review and recording process.	Flood	High	Fuquay-Varina Planning	Local	June 2015	In progress. Adoption of LDO is anticipated in June 2015, with efforts referenced to be in addition to current standards. This strategy will provide for a minimum buildable area outside of any environmentally sensitive areas that may be present. See action related to adoption of LDO.
P-12	Map storm water drainage system as part of Phase II Stormwater Management Plan.	Flood	High	Fuquay-Varina Engineering	Local	2015, Annual review and update	The Town continues to map both existing and new systems in order to provide more accurate account of facilities.
P-13	Provide for public dissemination building inspections brochures regarding high winds, water damage prevention, and tie downs for accessory structures.	Flood, Tornado, Hurricane, Thunderstorm/ High Wind	Moderate	Fuquay-Varina Inspections	Local	2015, Annual review and update	Brochures are available in public location at the Town Hall and are regularly distributed. Enforcement of the NC Building Code also furthers this effort.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Property Protection							
PP-1	Continue to enforce the Flood Damage Prevention Ordinance for all new construction or substantial building rehabilitations.	Flood	High	Fuquay-Varina Planning	Local	Completed	The review process for new development and rehab or expansion of existing development requires permittees to address any environmentally sensitive areas via the permitting process. This action will be removed from the plan at the next update.
PP-2	Require minimum finished floor elevation in known FEMA flood hazard zones be minimum 2' about base flood elevation.	Flood	High	Fuquay-Varina Planning and Inspections	Local	Completed	Enforced through building permitting and verification between departments. See PP-1 implementation status above. This action will be removed from the plan at the next update.
PP-3	Develop Stormwater Management Plan based on NPDES Phase II Stormwater Requirements to help reduce flood damages (see also P-6).	Flood	High	Fuquay-Varina Engineering	Local	Completed	Completed. Adoption of Stormwater Management Plan in February 2014 to assist in regulation of runoff control and reduced effects of hazards.
PP-4	Identify and inventory buildings that are located in FEMA flood zones to determine which structures may be prone to flooding (possible relocation and/or elevation).	Flood	High	Fuquay-Varina Planning and Engineering	Local	December 2014	In progress. Inventory to be compiled using LIDAR data recently made available, along with 2006 FEMA FIRM mapping.
Natural Resource Protection							
NRP-1	Work with the U.S. Army Corps of Engineers on wetland protection.	Flood	Moderate	Fuquay-Varina Planning	Local	2015, Annual review and update	Annual effort to minimize the impact on environmentally sensitive areas and is integral to procedures outlined in the Town's regulations.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-2	Use Open Space Ordinance to protect wildlife habitat.	All	Moderate	Fuquay-Varina Planning	Local	Completed	The open space development regulations, most commonly used residential development use in town, provide that no environmentally sensitive areas be lotted into and remain as open space. This regulation provides protection from disturbance. This action will be removed from the plan at the next update.
NRP-3	Continue to utilize Wake County Erosion and Sedimentation Control to ensure proper erosion control procedures are followed before and during construction.	Flood, Erosion	Moderate	Fuquay-Varina Planning and Inspections	Local	Completed	The Town has an ongoing relationship with Wake County Erosion Control, who is contracted to provide services listed. There is procedure to ensure that projects don't move forward to construction from plan review without being reviewed by WCEC. This action will be removed from the plan at the next update.
NRP-4	Notify Wake County of any illegal stream dumping instances	Flood	Moderate	Fuquay-Varina Public Utilities, Wake County Environmental Services	Local	Completed	The Town continues to work with Wake County on illegal dumping to maintain free flow in water ways and reduce runoff and impacts to downstream structures. This action will be removed from the plan at the next update.
NRP-5	Incorporate regulations for illicit discharge control in Phase II Stormwater Management Plan.	Flood	Moderate	Fuquay-Varina Engineering	Local	February 2014	Completed. Adoption of Stormwater Management Plan in February 2014 to assist in regulation of runoff control and reduced effects of hazards.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-6	Enforce standards for tree protection and control of clear cutting (Town has received legislative authority to enact tree protection and control of clear cutting standards.)	Flood	High	Fuquay-Varina Planning	Local	Completed	The Town's program has been in place since 2007 and is a standard used with new developments to minimize erosion and maintain vegetative areas. This action will be removed from the plan at the next update.
Structural Projects							
SP-1	Incorporate on-site retention/detention requirements for Phase II Stormwater Management Plan.	Flood	High	Fuquay-Varina Engineering	Local	Completed	Completed. Adoption of Stormwater Management Plan in February 2014 to assist in regulation of runoff control and reduced effects of hazards.
Emergency Services							
ES-1	Maintain current warning system with local sirens on elevated platforms and use of the Emergency Broadcast System.	All	High	Fuquay-Varina Fire, Police, and Wake County Emergency Management	Local, County, State	Completed	Land officials work with County and others in order to ensure proper maintenance of equipment. This action will be removed from the plan at the next update.
ES-2	Examine need to evaluate weather radio distribution program (daycares/nursing homes) initiated by Wake County Emergency Management 1999	All	Moderate	Wake County Emergency Management	County	2015, Annual review and update	This strategy is annually updated, as the need is subject to change over time, but has not yet been determined to be such a need that implementation is necessary.
ES-3	Revise current (1977) Town ordinance regarding civil preparedness	All	Moderate	Fuquay-Varina Fire and Police	Local	Completed	Completed. In 2006, the Town adopted a new Emergency Operations Plan and Disaster Operations Plan with funding through WCEM, with the plan mirroring the Wake County plan with the exception of personnel and responsibilities.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-4	Update and implement a Basic Emergency Operations Plan and a Disaster Operations Plan for the Town.	All	Moderate	Fuquay-Varina Fire and Police	Local	June 2016	Update necessary aspects of plans, adopted in 2006, for relevance, personnel, and responsibilities.
ES-5	Coordinate an incident command course for all Town employees, related to Emergency Operations Plan and Disaster Operations Plan for the Town.	All	Moderate	Fuquay-Varina Fire and Police	Local	November 2016	New action. Provide training on general and updated plans to be better prepared for implementation if necessary.
ES-6	Conduct a scenario-based training exercise, related to Emergency Operations Plan and Disaster Operations Plan for the Town.	All	Moderate	Fuquay-Varina Fire and Police	Local	March 2017	New action. Conduct a training exercise to further objective of training and preparedness for employees.
ES-7	Assist Wake County Emergency Management with updating list of local hazardous materials sites.	All	Moderate	Fuquay-Varina Fire and Wake County Emergency Management	Local, County	Completed	Town departments work regularly and closely with WCEM to ensure coordination on known hazardous sites. Facilities are reviewed and inspected, with Fire Department involved in plan review prior to development. This action will be removed from the plan at the next update.
ES-8	Continue Pre-Fire Incident Plan program for all commercial facilities within the Town limits.	All	High	Fuquay-Varina Fire	Local	Completed	Inspections of commercial facilities occur at regular intervals in an effort to ensure maintenance and consistency with initial approval. Fire hazards are thereby reduced. This action will be removed from the plan at the next update.
ES-9	Address securing and cleaning up affected hazardous areas when revising Disaster Operations Plan.	All	High	Fuquay-Varina Fire and Police, Wake County Emergency Management and North Carolina Highway Patrol	Local, County	Completed	Completed. This item has been implemented as referenced, but may also be updated in accordance with updates to Emergency Management Plan, as referenced in action item above.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-10	Continue to evaluate and improve response and recovery methods following each hazard event.	All	High	Fuquay-Varina Fire and Police	Local	Completed	This is an ongoing process to improve and evaluate responses and recovery methods for hazard events. Training and post evaluation help improve capabilities. This action will be removed from the plan at the next update.
ES-11	Examine the feasibility and need to contract/purchase a reverse 911 system to alert citizens of impending danger.	All	Moderate	Fuquay-Varina Fire, Police, Information Technology and Public Information	Local	June 2016	In progress. The idea of a reverse system must be vetted for feasibility and cost-benefit of implementation to minimize possible loss of life.
ES-12	Finalize implementation of new/updated radio communication equipment.	All	Moderate	Fuquay-Varina Fire and Police	Local	January 2017	New action. Beginning in 2013, radio communication equipment replacement is currently occurring, with completion anticipated in January 2017.
Public Education and Awareness							
PEA-1	Maintain floodplain maps for public use and produce other maps as needed.	Flood	Moderate	Fuquay-Varina Planning and Engineering	Local	2015, Quarterly review and update	The Town maintains a website with up-to-date flood mapping. The Town provides printed maps as requested and updates maps for public display approximately quarterly. Other maps, such as transportation or land use maps, include environmental information to help support protection.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-2	Develop and maintain a hazard mitigation section on the Town website that is updated every 5 years as the plan is updated.	All	High	Fuquay-Varina Planning and Information Technology	Local	Completed	The Town's webpage dedicated to the HMP is user-friendly and easy to understand for the general public, and is regularly reviewed for relevant content and updated as appropriate. This action will be removed from the plan at the next update.
PEA-3	Collect educational materials on disaster preparedness and display at public library and local government offices.	All	High	Fuquay-Varina Planning, Inspections, Police, and Fire	Local	Completed	The Town makes available brochures and materials at a public location in Town Hall for anyone interested. The plan was provided to the local public library in 2004 and since. This action will be removed from the plan at the next update.
PEA-4	Educate public on importance of channel maintenance as part of Phase II Stormwater Management Plan.	Flood	Moderate	Fuquay-Varina Engineering	Local	Completed	In previous years through 2014, the Town has partnered with the Clean Water Education Partnership for material dissemination at events. This action will be removed from the plan at the next update.
PEA-5	Work with local real estate agents to ensure that potential buyers are aware of properties that are exposed to potential flood damage.	Flood	Moderate	Fuquay-Varina Planning	Local	Completed	Staff works with agents regarding any questions they propose. The same sources of information references in PEA-1 above are available for use. This action will be removed from the plan at the next update.
PEA-6	Require delineation of Wake County Flood Hazard Soils, FEMA flood zones, and wetlands on final plats.	Flood	Moderate	Fuquay-Varina Planning	Local	Completed	The Town makes every effort to include information on final subdivision plats. This action will be removed from the plan at the next update.

Town of Garner Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Institute NPDES Phase II Stormwater Program.	Flood Drought	High	Garner Engineering	High	Completed	This program has been implemented and so the action will be removed from this plan in the next update.
P-2	Evaluate the need for regulations to encourage use of low impact development site planning principles to help control stormwater volume impacts.	Flood, Dam	Moderate	Garner Engineering and Planning	Moderate	2018	Low impact development principles have been evaluated, but more regulations concerning stormwater could improve flood issues.
P-3	Enforce zoning ordinance standards that help minimize impervious surface coverage in priority and healthy watersheds.	Flood	Moderate	Garner Engineering and Planning	Moderate	Completed	This ordinance has been implemented and so the action will be removed from this plan in the next update.
P-4	Continue to ensure good site planning by carefully reviewing development plans, meeting with developers and making site inspections to ensure existing soil erosion and sedimentation control regulations are being implemented properly.	Flood	High	Garner Engineering and Wake County	High	Completed	These regulations have been implemented and so the action will be removed from this plan in the next update.
P-5	Establish an open space prioritization and acquisition program to ensure maximum success with limited funds.	Flood	High	Garner Board of Aldermen and Parks and Recreation	High	Completed	Since the Town of Garner recently developed a 96 acre passive park in 2006-2007 this is no longer at the top of the priority list.
P-6	Partner with Wake County and other interested parties to jointly identify and acquire open space lands.	All Hazards	High	Garner Board of Aldermen and Wake County and Open Space Advisory Committee	High	2018	Planning interlocal agreement with City of Raleigh for stewardship of open space/conservation property in Garner. This action will be worked on going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-7	Adopt Comprehensive Land Use Plan that will provide a 20-year plan for town growth and include goals and policies for public safety and hazard mitigation.	All Hazards	High	Garner Planning	High	Completed	The comprehensive plan was adopted in 2006.
P-8	UDO: Continue to provide stream and creek buffers, and floodplain and wetland protection.	Flood	High	Garner Planning	High	2017	Stream and creek buffers are in place, but additional measures to protect floodplains and wetlands could be useful going forward.
P-9	UDO: Subdivision Standards – Continue to provide protection for residential areas by not allowing residential lots in the floodplain.	Flood	High	Garner Planning	High	Completed	Residential lots are not allowed in the floodplain so this action will be removed from the next update.
P-10	UDO: Watershed Protection Overlay District – Ensure riparian buffers are provided for perennial and intermittent streams, lakes, and ponds.	Flood	High	Garner Planning and Public Works	High	Completed	Riparian buffers are provided for intermittent streams, lakes, and ponds so this action will be removed from the next update.
P-11	Provide adequate water supply through storage and interconnection with other public water systems.	Drought	Moderate	City of Raleigh and Garner Engineering	Moderate	2018	City of Raleigh utilities currently using Lake Benson as primary water source. Additional water sources should be evaluated going forward.
P-12	Provide backup power for all critical public facilities (Police, Public Works, and other critical public buildings).	All Hazards	Moderate	Garner Administration	Moderate	2019	Town Hall Complex and Public Works completed; New Police Facility planned with generator
P-13	Maintain major town transportation routes through snow and ice removal including experimenting with brine in 2004.	Severe Winter Storms	Moderate	Garner Public Works	Moderate	Completed	Use of brine has proven effective in snow and ice removal. This strategy will be continued in the future.
P-14	On a regular basis, continue to back-up information pertaining to Town government in case of an emergency.	Flood, Hurricane and High winds, Tornado, Winter, Dam	Moderate	Garner Computer Information Services	Moderate	Completed	Critical financial data backed up offsite.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-15	Garner Transportation Plan – Continue to address disaster preparedness (evacuation) through road interconnectivity, paved roads, and widening of roads.	Flood, Hurricane and High winds, Tornado, Winter	Moderate	Garner Planning and Public Works	Moderate	2019	This plan has been implemented, but it will require review and update to account for new development and changes in overall transportation system
P-16	Evaluate ways to amend landscape ordinance requirements regarding the maintenance of pervious surface areas for natural stormwater water detention.	Flood	Moderate	Garner Planning	Moderate	Completed	There has been an informal practice to require this during site approval, particularly as it related to landscaping in BMP's since June 2007
P-17	Incorporate Greenway Plan into Open Space Plan.	Flood	Moderate	Garner Planning and Parks and Recreation	Moderate	Completed	The Greenway plan has been incorporated into the Open Space plan since it was adopted in 2006
P-18	Incorporate requirement for open space set aside in residential and multi-family projects.	Flood	Moderate	Garner Planning	Moderate	Completed	There is a requirement for open space set-asides in residential and multi-family projects.
P-19	Develop for public dissemination building inspections brochures regarding high winds, water damage prevention, and tie downs for accessory structures.	Flood, Hurricane and High winds, Tornado, Winter	Moderate	Garner Inspections	Moderate	2018	The Town website was recently redesigned and this information was not included. Going forward, more information will be included on reducing damage and mitigation.
P-20	Building Code - The Town administers a program upholding the 2002 International Building Code with North Carolina Amendments. These regulations provide guidance for design criteria for flood, roof snow load, winter design, wind speed, seismic design, weathering, frost line depth, termite infestation, and decay.	Flood, Hurricane and High winds, Tornado, Winter	High	Garner Inspections	High	Completed	The town administers the NC Building Code so this action will be removed from the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-21	Comprehensive Growth Plan - The Town has an existing Comprehensive Plan which includes Land Use, Parks and Recreation, Public Safety, Housing, economic Development, Transportation, Public Utilities and Environment. This plan includes past and current conditions and sets goals for future needs of the Town.	All Hazards	Moderate	All	Moderate	Completed	The town has its Comprehensive Growth Plan in place so this action will be removed from the next update.
P-22	Land Use Plan - An existing tool which guides development based on proposed future land use designations, available services, and existing site features to ensure that future development is meeting the overall vision of the Town while ensuring the safety of citizens.	Flood, Hurricane and High winds, Tornado, Winter, Wildfire, Dam	High	Garner Planning	High	Completed	The town has its Land Use Plan in place so this action will be removed from the next update.
P-23	Floodplain Development Regulations – Ordinance to minimize public and private losses due to flood conditions.	Flood	High	Garner Engineering	High	Completed	The town has Floodplain Development Regulations in place so this action will be removed from the next update.
P-24	Floodplain Development Regulations - Town is a participating member of the National Flood Insurance Program and is considering actively participating in the Community Rating System to help monitor hazard mitigation efforts and to improve the affordability of flood insurance for citizens.	Flood	High	Garner Engineering	High	Completed	The town has Floodplain Development Regulations in place so this action will be removed from the next update.
P-25	Open Space Preservation - The Town has an existing Open Space Master Plan which identifies and evaluates various land and open space resources throughout the ETJ and Urban Service areas of the Town. The Plan has been used to develop a prioritization system that is used by all Town departments to identify properties to acquire or require as open space.	Flood	High	Garner Parks and Recreation	High	Completed	The town has an Open Space Master Plan in place so this action will be removed from the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-26	Unified Development Ordinance (UDO) – Existing UDO regulates development to ensure safety from fire, panic and other dangers. The UDO provides for orderly growth and development within the Town and ETJ by determining appropriate land use and development standards.	Flood, Hurricane and High winds, Tornado, Winter, Wildfire, Dam	High	Garner Planning	High	Completed	The town has a Unified Development Ordinance in place so this action will be removed from the next update.
P-27	The Town will inventory all its structures located within or immediately adjacent to known flood hazard areas.	Flood	Moderate	Garner Planning and Engineering	Moderate	2017	The Town evaluated properties in 2008 and flood insurance was purchased for properties in the floodplain. However, this inventory needs to be updated and re-evaluated to ensure proper mitigation.
P-28	The Town will seek opportunities to use Federal grant resources to assist private property owners in elevating existing structures located within flood hazard zones.	Flood	Moderate	Garner Planning and Engineering	Moderate	2019	Town pursued this but does not have a history of high flood risk properties. The town will continue to evaluate and seek funding opportunities to mitigate flood prone properties in the future.
Property Protection							
PP-1	The Town has a service to respond to requests and questions from citizens regarding actions they may take to improve drainage, halt erosion, and to relocate, renovate or retrofit structures being flooded.	Flood	Moderate	Garner Engineering	Local, Private	2015, Annual updates	The Town has a service to respond to requests and questions from citizens regarding actions they may take to improve drainage, halt erosion, and to relocate, renovate or retrofit structures being flooded. This program will be updated and reevaluated each year

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PP-2	Minimum Housing Standards Ordinance - The Town has a program which inspects existing structures to ensure that they meet the minimum housing standards. Owners of structures that do not meet these requirements will be ordered to bring the structure up to minimum standards or have the structure demolished or removed.	Flood, Hurricane and High winds, Tornado, Winter	High	Garner Inspections	Local	Completed	The town has a Minimum Housing Standards Ordinance in place so this action will be removed from the next update.
PP-3	Building Retrofit - The Town is willing to develop a plan to utilize Federal grant resources to assist private property owners in renovating and retrofitting existing structures.	Wind	Low	Garner Inspections	Local, Federal	2018	Thus far, have not had property owners to request this resource, but the town will continue to work to develop a plan to implement retrofits for future residents who so desire.
PP-4	Purchase of Open Space, Parks and Greenways – The Town works with Wake County and other agencies to find other funding for open space acquisition. Once funds are obtained the Town will acquire land consistent with Land Use and Master Open Space Plans.	Flood	Moderate	Garner Parks and Recreation	Local	Completed	The Town works with Wake County and other agencies to find other funding for open space acquisition. Once funds are obtained the Town will acquire land consistent with Land Use and Master Open Space Plans. This action has been completed so it will be removed from next update.
PP-5	Engineering Department will actively respond to flooding concerns from property owners after heavy rain events	Flood	Moderate	Garner Engineering	Local	Completed	Town response based on Town Drainage Policy. This action will be removed from the next update.
PP-6	When feasible, Town of Garner will alleviate flooding into habitable space due to storm water, as consistent with Town Drainage Policy.	Flood	Moderate	Garner Engineering, Town Council	Local	2019	Although many modifications have been made, the town will work to improve its overall stormwater drainage system going forward.
PP-7	Maintain a record of approved Letters of Map Change to continue compliance with NFIP.	Flood	Moderate	Garner Engineering	Local	Completed	The town maintains these letters and will continue to do so. This action will be removed from the next plan update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Natural Resource Protection							
NRP-1	The Town has adopted cluster subdivision regulations and a recreation land dedication ordinance to enhance conservation efforts.	Flood, Hurricane and High winds, Tornado, Wildfire, Winter	High	Garner Planning	Local	Completed	The Town has adopted cluster subdivision regulations and a recreation land dedication ordinance to enhance conservation efforts. This action will be removed from the next update.
NRP-2	Develop and adopt a conservation subdivision ordinance to help preserve significant natural features.	Flood, Hurricane and High winds, Tornado, Winter	Moderate	Garner Planning	Local	2017	This will become a long term goal. The Cluster Subdivision meets a majority of the criteria, but more effort will be made to preserve natural features.
NRP-3	UDO 6.1.12 – Continue to require engineered stormwater controls including stream and wetland protection.	Flood, Dam	Moderate	Garner Planning and Engineering	Local	Completed	The town’s UDO is in place so this action will be removed from the next update.
NRP-4	Continue to work with the U.S. Army Corps of Engineers on wetland protection.	Flood	Moderate	Garner Planning and Engineering	Local	2018	Some efforts at wetland protection have been made over the last 5 years, but more work is necessary so the town will aim to provide more protection going forward.
NRP-5	Use Open Space Ordinance to protect wildlife habitat.	Flood, Hurricane and High winds, Tornado, Wildfire, Winter	Moderate	Garner Planning	Local	2017	The Open Space Ordinance will be utilized to protect wildlife habitat going forward even though it has not been used to a large degree in the past.
NRP-6	Continue to utilize Wake County Erosion and Sedimentation Control to ensure proper erosion control procedures are followed before and during construction.	Flood, Dam, Erosion	Moderate	Garner Planning and Engineering	Local	Completed	Wake County Erosion and Sedimentation Control has been utilized to reduce erosion and the system is in place so this action will be removed in the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-7	Notify Wake County of any stream dumping instances.	Flood	Moderate	Garner Engineering	Local	Completed	A system of notifying the county is in place so this action will be removed from the next update.
NRP-8	Incorporate regulations for illicit discharge control in Phase II Stormwater Management Plan.	Flood	Moderate	Garner Engineering	Local	Completed	Regulations for illicit discharge control have been integrated so this action will be removed from the next update.
NRP-9	Develop standards for tree protection and regulations governing clear cutting.	Flood, Wildfire	High	Garner Planning	Local	Completed	Standards for tree protection have been developed so this action will be removed from the next update.
NRP-10	Best Management Practices (BMPs) - The Town will include in the stormwater management plan (being developed with the Town NPDES Phase II Program) BMPs that will address both water quality and water quantity management on sites.	Flood, Dam	Moderate	Garner Engineering	Local	Completed	BMPs are the typical process for site plan approval so this action will be removed from the next update.
NRP-11	Stream Dumping – In developing the NPDES Phase II Stormwater program, the Town will design and implement an illicit discharge program which will establish regulations against stream dumping.	Flood	Low	Garner Engineering	Local	Completed	The town has developed a program that establishes regulations against stream dumping so this action will be removed from the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-12	Wetlands Protection - The Town has existing Riparian Buffer, Open Space, and Flood Damage Prevention ordinances that restrict development along streams and in the floodplain thus restricting development in much of the Town's wetland areas. Engineering Design Standards require that all impacts to wetlands be permitted by the U.S. Army Corps of Engineers and the NCDENR Division of Water Quality prior to issuance of a Land Disturbance Permit. The Town also has an existing program that ensures that structures, through review of the Building Permit application, are not constructed in the wetlands unless permitted by the appropriate Federal and State Agencies.	Flood	Moderate	Garner Engineering, Parks and Recreation, and Inspections	Local	Completed	The town has developed a program for wetlands protection so this action will be removed from the next update.
Structural Projects							
SP-1	Pursue stream restoration projects	Flood	High	Garner Engineering	Local, Regional, State, Federal	2019	The Town will continue to actively pursue stream restoration projects and will look for ways to expand the program through partnerships with various entities.
SP-2	Incorporate on-site retention/detention requirements for Phase II Stormwater Management Plan.	Flood	High	Garner Engineering	Local	2015	Phase II plan approved by NC Department of Environment and Natural Resources Waiting for comment period to end.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Emergency Services							
ES-1	Identify priority Town facilities and provide access to one main entrance. Restore life safety and building systems as needed.	Flood, Hurricane and High winds, Tornado, Winter	High	Garner Public Works	Local, FEMA	Completed	Town crews on standby during and after storms to clear roads and crucial Town facilities. Also, Town Hall and Police Station have standby generator for power outages. Since this system is in place, this action will be removed at the next update.
ES-2	Develop a Business Continuity Plan that is the primary document housing all disaster related plans and procedures including Hazard Mitigation Plan, Debris Management Plan, Multi-Hazard Plan as well as disaster response plans for all Town departments.	Flood, Hurricane and High winds, Tornado, Winter	High	Garner Police and Public Works	Local	2018	Town entered into a cooperative contracting agreement with the county for Disaster Debris Cleanup and monitoring in 2013. No formal disaster debris plan has been adopted.
ES-3	Emergency Operations Command Post Center – established when natural hazard imminent. Center coordinates evacuations, sheltering, staging areas for equipment, manpower, and needed supplies. Equipment includes internet access, telephone, wireless communications, radio and backup supplied by emergency batteries and/or generators.	Flood, Hurricane and High winds, Tornado, Winter, Wildfire	High	Garner Police	Local	April 2015	Plans are underway to build a new police facility that will have the capability of acting as an EOC.
ES-4	Health and safety maintenance – provide assistance with security and post storm clean-up.	Flood, Hurricane and High winds, Tornado, Winter	High	Garner Police , Public Works, and EMS	Local	Completed	The town has a system in place to maintain health and safety post-storm so this action will be removed from next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-5	Post disaster response – building inspections. Inspector team does post disaster damage assessment using FEMA guidelines.	Flood, Hurricane and High winds, Tornado, Winter	Moderate	Garner Inspections	Local	Completed	Inspector team does post disaster damage assessment using FEMA guidelines. This action will be removed from next update.
ES-6	Continue to evaluate and improve response and recovery methods following each hazard event.	Flood, Hurricane and High winds, Tornado, Winter, Wildfire	High	Garner Police	Local	Completed	The town will review and update its response and recovery methods after each hazard event. This action will be removed from next update.
ES-7	Tracking of Known Drainage, Erosion and Flooding Problems - The Town has a current program to track drainage complaints, flooding and erosion problems within the town limits and ETJ.	Flood	Moderate	Garner Engineering	Local	Completed	The Town has a current program to track drainage complaints, flooding and erosion problems within the town limits and ETJ. This action will be removed from next update.
ES-8	Mobile Command Post - Available 24 hours a day and equipped to communicate with all agencies in the Triangle including Emergency Management, State agencies, fire departments, etc. The Town will be upgrading this service.	All Hazards	High	Garner Police	Local, State	2018	Available 24 hours a day and equipped to communicate with all agencies in the Triangle including Emergency Management, State agencies, fire departments, etc. The Town will be upgrading this service. Add to Town's CIP for future funding.
Public Education and Awareness							
PEA-1	Stormwater staff provides flood information through calling or e-mail program to any inquirer. County requires that flood zone information be shown on all plats recorded within the Town planning jurisdiction.	Flood	High	Garner Engineering	Local	Completed	Stormwater staff provides flood information through calling or e-mail program to any inquirer. County requires that flood zone information be shown on all plats recorded within the Town planning jurisdiction. This action will be removed from next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-2	Town website will be updated to answer citizen questions about flood hazards, flood safety, availability of flood insurance, stormwater regulations, and other information.	Flood	Moderate	Garner Engineering	Local	2015	Engineering department will add storm water and floodplain information to the website
PEA-3	Town website will be updated with public access to information pertaining to evacuation routes, emergency contact numbers, and detailed weather reports in case of emergency.	Flood, Hurricane and High winds, Tornado, Winter, Wildfire	Moderate	Garner Computer Information Services	Local	2015	Since this activity is headed by Wake County Emergency Management, the Town will include a link on its website.
PEA-4	Continue to update flood hazard maps to reflect new subdivisions, changes in corporate limits, and any new DFIRM data as provided by the County.	Flood	Moderate	Garner Engineering and Planning	Local	Completed	Flood plain maps updated. Garner saw little to no change in base flood elevations
PEA-5	Planned park land purchase – nature park to include trails and environmental education center.	Flood	High	Garner Parks and Recreation, POSE	Local, Wake County, State Grant	Completed	Town completed development of White Deer Park in October 2009. It has a LEED certified Nature Center that focuses on environmental education. It preserves open space and has several BMPs for water quality and quantity.
PEA-6	Maintain floodplain maps for public use and produce other maps as needed.	Flood	Moderate	Garner Engineering	Local	Completed	The town has floodplain maps and other maps showing flood risk. This action will be removed from the next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-7	Develop and maintain a hazard mitigation section on the Town website.	All Hazards	Moderate	Garner Administration and Computer Information Services	Local	2015	The Town website was recently redesigned and a hazard mitigation section was not included. However, the Hazard Mitigation Plan has been posted on the Town website. A separate section will be created and information added.
PEA-8	Collect educational materials on disaster preparedness and display at public library and local government offices.	Flood, Hurricane and High winds, Tornado, Winter, Dam	High	Garner Administration	Local	Completed	The Town posts the "Ready Wake" brochures created by Wake County in Town Hall buildings during hurricane season so this action will be removed from the next update.
PEA-9	Map Information - The Town maintains current FIRM maps/studies for Town limits and ETJ. Town also maintains current land use, structure, and development maps. All maps are available for public use.	Flood, Wildfire	High	Garner Engineering and Planning	Local	Completed	The Town maintains current FIRM maps/studies for Town limits and ETJ. Town also maintains current land use, structure, and development maps. All maps are available for public use.
PEA-10	Website - The Town maintains its own website which is able to provide up to date information for the public. Town continuously updates the site with additional resources.	All Hazards	High	Garner Town Council, Computer Information Services, All Departments	Local	2018	The Town website was recently redesigned. Going forward, more information will be included on reducing damage and mitigation.
PEA-11	Website- Create link to Wake County Hazard Mitigation Plan.	All Hazards	Moderate	Garner Computer Information Services	Local	Deleted	Combine with PEA-7

Town of Holly Springs Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Adopt Building Code	All	High	Holly Springs Code Enforcement	Local	Completed	The Town administers a program upholding the 2002 International Building Code with North Carolina Amendments. These regulations provide guidance for design criteria for flood, roof snow load, winter design, wind speed, seismic design, weathering, frost line depth, termite infestation and decay. This action will be removed from the next update
P-2	Develop Vision Holly Springs Comprehensive Plan	All	Moderate	Holly Springs Planning & Zoning	Local	Completed	The Town has an existing Comprehensive Plan which includes Land Use, Parks and Recreation, Public Safety, Economic Development, Transportation, Public Utilities and Environment. This plan includes past and current conditions and sets goals for future needs of the Town. The Hazard Mitigation Plan will be incorporated as an additional component of the CGP at plan update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-3	Develop Land Use Plan	All	High	Holly Springs Planning & Zoning	Local	Completed	This is an existing tool which guides development in Town based on proposed future land use designations, available services, and existing site features to ensure that future development is meeting the overall vision of the Town while insuring the safety of its citizens. This action will be removed from the next update
P-4	Implement Floodplain Development Regulations to minimize public and private losses due to flood conditions.	Flood	High	Holly Springs Engineering	Local	Completed	The Town has an ordinance developed to minimize public and private losses due to flood conditions. The latest update of the Flood Damage Prevention Ordinance was May 2, 2006. (00-23) This action will be removed from the next update
P-5	Implement Floodplain Development Regulations to restrict or prohibits uses which are dangerous to health, safety and property	Flood	High	Holly Springs Engineering	Local	Completed	The Town restricts or prohibits uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities. (00-23) This action will be removed from the next update
P-6	Implement Floodplain Development Regulations that require that uses vulnerable to floods be protected against flood damage at the time of initial construction	Flood	High	Holly Springs Engineering	Local	Completed	The Town has a program that requires that uses vulnerable to floods be protected against flood damage at the time of initial construction. (00-23) This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-7	Implement Floodplain Development Regulations to control the alteration of natural floodplains, stream channels and natural protective barriers	Flood	High	Holly Springs Engineering	Local	Completed	The Town has an ongoing program that controls the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of flood waters (00-23) This action will be removed from the next update
P-8	Implement Floodplain Development Regulations to control filling, grading, dredging and other development	Flood	High	Holly Springs Engineering	Local	Completed	The Town has an ongoing program that controls filling, grading, dredging and other development which may increase erosion or flood damage (00-23) This action will be removed from the next update
P-9	Implement Floodplain Development Regulations related to participating in the National Flood Insurance Program	Flood	High	Holly Springs Engineering	Local	2016	The Town evaluated the Town's potential participation in the Community Rating System (CRS) and determined that the amount of insured properties in the Town did not warrant participation in the CRS. However, staff will reevaluate this determination in the future through the implementation of the Floodplain Management Program. Will re-evaluate in 2016.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-10	Implement Floodplain Development Regulations – to prevent or regulate the construction of flood barriers which will unnaturally divert flood waters	Flood	High	Holly Springs Engineering	Local	Completed	The Town has an ongoing program that prevents or regulates the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands (00-23). This action will be removed from the next update
P-11	Increase Open Space Preservation	Flood	High	Holly Springs Parks & Recreation	Local State	Completed	The Town has an existing Open Space Master Plan which identifies and evaluates various land and open space resources throughout the ETJ and Urban Service areas of the Town. The Plan is used to develop a prioritization system that can be used by all Town departments for identifying properties to acquire or require as open space from developers as the Town grows. This action will be removed from the next update
P-12	Adopt Unified Development Ordinance (UDO)	All	High	Holly Springs Planning & Zoning	Local	2015, review and update annually	The Town has an existing UDO which regulates development to ensure safety from fire, panic and other dangers. The UDO provides for orderly growth and development within the Town and ETJ by determining appropriate land use and development standards. The UDO is in place, but the town will update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-13	Adopt Water Shortage and Conservation Ordinance	Droughts and Heat Waves	High	Holly Springs Engineering	Local	Completed	The Town has an existing ordinance that is designed: (1) to implement permanent seasonal water conservation measures; (2) to provide for the declaration of increasingly serious stages of water shortages, and (3) to define mandatory water conservation measures to be implemented during these various stages. The Water Shortage and Conservation Ordinance is intended to preserve the water resources of the Town under specific conditions so that water demands for human consumption, sanitation, and fire protection can be met as cost-efficiently as possible throughout the service area. (98-10). This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-14	Adopt Stormwater Management Regulations	Flood	High	Holly Springs Engineering	Local	2019	The Town maintains numerous basin HEC-HMS and HEC-RAZ models to determine the water surface elevation where nuisance flooding is a known problem. To ensure that water surface elevations and velocities in the streams do not get worse, the Town has adopted a policy to require new development, to run the model with the proposed development and to add stormwater BMPs or other measures to make sure that there is not a negative impact downstream. When new developments occur, models will need to be re-run.
P-15	Carry out Water System Vulnerability Assessment	All	High	Holly Springs Public Utilities, Engineering	Local	Completed	This assessment was completed in 2004
Property Protection							
PP-1	Implement Minimum Standards Ordinance	All	High	Holly Springs Code Enforcement	Local	Completed	The Town has a program which inspects existing structures to ensure that they meet the Minimum Housing Standards Ordinance. Structures that do not meet these requirements will be ordered to bring up to minimum standards, demolished or removed. Safety officer in code enforcement department handles this program. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PP-2	Barrier Installation.	Flood	Moderate	Holly Springs Engineering	Local	Completed	The Town has an ongoing program that prevents or regulates the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands (00-23). The NPDES Phase II Stormwater Illicit Discharge Detection & Elimination Regulations has provisions for watercourse protection which requires property owners to keep and maintain the watercourse free of trash, debris, excessive vegetation and other obstacles that would pollute, contaminate or significantly retard flow of the water through the watercourse. This action will be removed from the next update
PP-3	Building Acquisition and Clearance - The Town is willing to develop a plan designed to utilize Federal grant resources to assist private property owners in purchasing properties located in flood hazard zones.	Flood	Low	Holly Springs Code Enforcement	Local, State, Federal	2017	No such program is in the works at this time. The town will need to evaluate properties that are potentially eligible and determine if funding is available
PP-4	Building Elevation.	Flood	High	Holly Springs Engineering	Local, State, Federal	Completed	The Town has an existing program which requires all residential and commercial finished floors to meet a minimum of 2-foot freeboard over the base flood elevation. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PP-5	Building Relocation - The Town is willing to develop a plan designed to utilize Federal grant resources to assist private property owners in relocating existing structures out of flood hazard zones.	Flood	Low	Holly Springs Code Enforcement	Local, State, Federal	2017	No such program is in the works at this time. The town will need to evaluate properties that are potentially eligible and determine if funding is available
PP-6	Building Retrofit - The Town is willing to develop a plan to utilize Federal grant resources to assist private property owners in renovating and retrofitting existing structures in flood hazard zones to reduce vulnerability to flooding damage.	Flood	Low	Holly Springs Code Enforcement	Local, State, Federal	2017	No such program is in the works at this time. The town will need to evaluate properties that are potentially eligible and determine if funding is available
PP-7	Bass Lake Area Plan - Design a plan specific to the Bass Lake line to determine mitigation in the event of a spill or disaster.	Flood	High	Holly Springs Public Utilities Public Works	Local	Deleted	Removed from actions due to infeasibility
PP-8	Outfall Maintenance	Flood	High	Holly Springs Public Works	Local	Completed	Continue sewer easement clearing and aerial main inspections/clearing to prevent and eliminate obstructions and erosion that can lead to infrastructure failure, as required by NC DENR DWQ regulations. The Town also uses cameras and jet smoke for inspection purposes.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PP-9	Purchase of Open Space, Parks and Greenways	Flood	Moderate	Holly Springs Parks and Recreation	Local	2018	The town has acquired hundreds of acres of open space in recent years. The Parks and Recreation Department is asking for \$500,000 for Capital Improvement Projects to purchase open space. The Town also works with Wake County and other agencies to find other funding for open space acquisition. Once funds are obtained the Town will acquire land consistent with Land Use and Master Open Space Plans.
PP-10	Enforce Open Space Requirements	Flood	Moderate	Holly Springs Parks and Recreation	Local	Completed	The Town requires every subdivision to provide open space or a fee-in-lieu which will be used to purchase property consistent with Land Use and Master Open Space Plans. This action will be removed from the next update
Natural Resource Protection							
NRP-1	Institute Best Management Practices (BMPs) for NPDES Phase II Post-Construction Stormwater Regulations	Flood	Moderate	Holly Springs Engineering	Local	Completed	The Town adopted NPDES Phase II Post-Construction Stormwater Regulations on November 6, 2007 and updated Section 8 of the Engineering Design & Construction Standards to address both water quality and water quantity management on sites. Staff is currently implementing this program. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-2	Develop Erosion and Sedimentation Control program	Flood	Moderate	Holly Springs Engineering	Local	Completed	Local program to enforce Erosion and Sedimentation Control standards. Local sedimentation control program complements state program. This action will be removed from the next update
NRP-3	Encourage good Forestry Practices.	Flood	Moderate	Holly Springs Engineering	Local	Completed	The Town has an existing program which requires a separate timbering plan within the Town Limits and ETJ. The Town received legislative authority in January 2004 to design and adopt ordinances to regulate the removal and preservation of trees within the Town Limits. Staff is currently working on updates to these regulations. This action will be removed from the next update
NRP-4	Encourage Habitat Protection	Flood	Moderate	Holly Springs Engineering	Local	Completed	The Town has existing riparian buffer and open space programs which allow for habitat protection. The Town also has additional requirements for areas where there are known threatened or endangered species, i.e., the Town has additional development requirements upstream of SR 1112 to protect the Eastern Tiger Salamander habitat which is negatively impacted by flooding of the pools adjacent to the floodplain. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-5	Discourage Stream Dumping	Flood	Low	Holly Springs Engineering	Local	Completed	The Town adopted the NPDES Phase II Stormwater Illicit Discharge Detection & Elimination Regulations on December 16, 2008 which enforces illicit discharges, illegal connections in or draining to the towns storm drainage system & blockages in watercourses. This action will be removed from the next update
NRP-6	Enforce Wetlands Protection	Flood	Moderate	Holly Springs Engineering, Code Enforcement	Local	Completed	The Town has existing Riparian Buffer, Open Space, and Flood Damage Prevention ordinances that restrict development along streams and in the floodplain thus restricting development in much of the Town's wetland areas. Engineering Design Standards require that all impacts to wetlands be permitted by the US Army Corps of Engineers and the NC DENR Division of Water Quality prior to issuance of a Land Disturbance Permit. The Town also has an existing program that ensures that structures, through review of the Building Permit application, are not constructed in the wetlands unless permitted by the appropriate Federal and State Agencies. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Structural Projects							
SP-1	Implement Channel Maintenance	Flood	High	Holly Springs Public Works	Local	Completed	The Town currently maintains all channels and culverts located within public right-of-way. These channels are inspected and maintained as needed to prevent failure or blockages. This action will be removed from the next update
SP-2	Implement Channel Modifications.	Flood	Moderate	Holly Springs Engineering	Local	Completed	The Town modifies channels through the construction of various road projects and ensures through the design that all State and Federal regulations are met. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
SP-3	Implement Channel Modifications & Maintenance	Flood	Moderate	Holly Springs Engineering	Local	Completed	The Town's drainage policies and Section 8 of the Engineering Design & Construction Standards include provisions not to maintain or modify drainage features on private property. With the design of a comprehensive stormwater management program the Town may consider changing Town Policy and set up a Stormwater Utility to undertake channel maintenance and modification projects on private property. In areas where there is finished floor flooding after Town Board approval the Town may assist residents in obtaining grant funding for stream restoration projects from available funding sources where the municipality must be the applicant for a project of that nature to be undertaken. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
SP-4	Implement Channel Modifications	Flood	Low	Holly Springs Engineering	Local	Deleted	Incorporated with S-3 above- The Town's drainage policies and Section 8 of the Engineering Design & Construction Standards include provisions not to maintain or modify drainage features on private property. In areas where there is finished floor flooding after Town Board approval the Town may assist residents in obtaining grant funding for stream restoration projects from available funding sources where the municipality must be the applicant for a project of that nature to be undertaken.
SP-5	Install Reservoirs/Retention/Detention Basins	Flood	Moderate	Holly Springs Parks & Recreation	Local	Completed	The Town does not currently maintain any retention or detention basins. The Town does maintain Bass Lake Dam. The Town regularly provides maintenance of vegetation and minor erosion while providing visual inspections of the dam. If larger repairs are required the Town will find appropriate means to resolve the problem. The Town also has a few small ponds located on existing parks. The Town maintains these ponds consistent with measures taken to maintain the Bass Lake Dam. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
SP-6	GPS Project to identify stormwater issues	All	Moderate	Holly Springs Engineering	Local	Completed	The Town locates and maps the sanitary sewer and water systems with GPS. The Town is currently in the process of locating points on stormwater outfalls. New development must also tie their sites into this system. GIS project is updated with new development. This action will be removed from the next update
Emergency Services							
ES-1	Tracking of Known Drainage, Erosion and Flooding Problems	Flood	Moderate	Holly Springs Engineering	Local	Completed	The Town has a current program to track drainage complaints, flooding and erosion problems within the town limits and ETJ. The Town maintains a complaint log, map of problem areas and photos to monitor the problem over time. The Town has also developed an inter-departmental office procedure for the Engineering Department to address Hurricane/Storm Preparation – Disaster to assist in the coordination between departments after an event, document flood & erosion and provide opportunity to revise the process for future events. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-2	Identification of Unsafe Structures	All	High	Holly Springs Code Enforcement	Local Federal	Completed	The Town has a continuing program which identifies unsafe structures after instances where damage to the structures could take place, e.g., strong winds or flooding. This action will be removed from the next update
ES-3	Backup Power to Fire and Police Stations	All	High	Holly Springs Public Safety	Local Federal	Completed	The Town provides backup power to all fire and police stations. Fire Station 1 – backup power provided by a grant; backup power to Fire Station 2 and Fire Station 3 and Police Station provided by local funds.
ES-4	Keep Technical Rescue Capabilities updated	All	High	Holly Springs Public Safety	Local Federal	2019	Regional technical rescue teams in place. We have automatic aid in place for their use. However, technical rescue capabilities could be improved with further funding and staff.
ES-5	Carry out After Action Report.	All	High	Holly Springs Public Safety	Local	Completed	The HSFJ conducts after-action briefings and reports for all significant incidents. This action will be removed from the next update
ES-6	Develop Standard Operating Guidelines	All	High	Holly Springs Public Safety	Local	Completed	SOGs were implemented in 2014 and will remain in effect going forward. This action will be removed from the next update
ES-7	Utilize GIS Programming to address hazards	All	Low	Holly Springs Public Safety	Local	2018	No current implementation plan in place. The town will look to develop this going forward.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-8	Have Urban Search and Rescue available	All	High	Holly Springs Public Safety	Local	2015	The Town currently has US&R services provided through the NC US&R team region 4, with backup assistance provided by region 8. Internally, we provide urban search and rescue services consisting of structural collapse and similar emergencies. .We will continue the use of NC US&R Teams. We currently do not have enough staffing and equipment to handle this on our own. We are looking at the possibility of moving to an intermediate level of training. Implementation goal 2015
ES-9	Purchase Warning Systems	All	High	Holly Springs Public Safety	Local, State	Deleted	The Town currently uses Wake County's warning systems.
ES-10	Purchase Warning Barricades	All	High	Holly Springs Public Safety	Local	Deleted	The Town uses visual warning barricades for vehicular and pedestrian traffic to block properties, roadways, etc. for the safety of the general public.
ES-11	Purchase Trailer Transportation.	All	high	Holly Springs Public Safety	Local	Deleted	Deploy step van and tandem axel trailers for transportation of emergency barricades and other equipment on a large scale.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-12	ECC Notifications by NOAA for possible severe weather (tornados, ice, etc.).	All	High	Holly Springs Public Safety	local	2017	ECC is notified by both agencies when weather alerts are issued. Information is then broadcast over police radios. This information is generated by the State and Wake County and is obtained through the use of DC message, radio, fax and Nextel. This is in place. The information flow needs some work. There were discussions on utilization of WEB EOC, not sure where implementation of that is.
ES-13	Purchase ACU 1000 Communications Unit	All	High	Holly Springs Public Safety	Local	Deleted	This action has been deleted due to infeasibility
ES-14	Develop Water Emergency Response Plan	All	High	Holly Springs Public Utilities, Engineering	local	Completed	Secondary water sources available during an emergency. A plan has been developed. This action will be removed from the next update
ES-15	Implement Tabletop Exercise Program	All	High	Holly Springs Public Safety	N/A	Completed	Tabletop exercises are held through public safety periodically and will continue to be done. This action will be removed from the next update
ES-16	Emergency Response Plans for the Police Station	All	High	Holly Springs Public Safety	Local	Completed	An emergency response plan is in place and will continue to be evaluated. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-17	Install Emergency Generator	All	Moderate	Holly Springs Public Works	Local	2018	The Town currently has an emergency generator to provide power to the Front Office of the Public Works Building during emergencies. Future goal is to provide 100% generator power to the building.
ES-18	Install additional Generators	All	High	Holly Springs Public Utilities	Local	2019	The wastewater treatment plant and sewer lift stations built after 1994 have generators. In emergency situations, the Town also has mobile generators to be used at lift stations built between 1985 – 1994 that are without permanent generators on site. Over the next ten years, the Town would like to purchase generators for lift stations that do not currently have generators.
ES-19	Mobile Command Post-Available 24 hours a day	All	High	Holly Springs Public Safety	Local State	Completed	Available 24 hours a day and equipped to communicate with all agencies in the Triangle including Emergency Management, State agencies, fire departments, etc .Partial availability and access to Wake EM Command Post This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-20	Drought Preparedness	All	High	Holly Springs Engineering, Public Utilities	Local	Completed	The Town has a drought preparedness and response program that includes conservation regulations, enforcement programs, and preliminary arrangements for alternate sources of water supply. This action will be removed from the next update
ES-21	Develop Emergency Response Plans	All	High	Holly Springs Public Safety	Local	Completed	Emergency response plans are all designed for officers to be assigned for security purposes until owners can take over the responsibility of securing premises. This action will be removed from the next update
ES-22	Adopt Mutual Aid	All	High	Holly Springs Public Works	Local	Completed	The Town of Holly Springs participates in NC water and sewer utilities mutual aid provision and system development. This action will be removed from the next update
ES-23	Implement Sewer Bypasses/Overflows	All	High	Holly Springs Public Utilities	Local	Completed	The Town has a wastewater flow equalization facility at the wastewater treatment plant to prevent sewer bypasses and sanitary sewer overflows in high flow events. Berms have also been installed around the water treatment plant and some of the sewer lift stations. The goal is to put berms around all lift stations as funds are acquired. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-24	Provide Counseling	All	High	Holly Springs Public Safety	Local	Completed	Police psychologist and Critical Incident Stress Debriefing Team training to provide debriefing sessions for personnel. This action will be removed from the next update
Public Education and Awareness							
PEA-1	Disseminate Environmental Education	Flood	High	Holly Springs Engineering	Local	Completed	The Town currently has a program which includes environmental education for the public through Town festivals (Holly Fest), public meetings, brochures and preconstruction meetings. The Town operates the Bass Lake Retreat Center which will allow for space to hold additional environmental education activities. The Town will also expand its current education activities to meet NPDES Phase II requirements. The Town's Environmental Education focuses on flooding, drainage, the National Flood Insurance Program, NPDES Phase II, Erosion & Sedimentation Control, Habitat Preservation, etc. This action will be removed from the next update

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-2	Disseminate Map Information	Flood	High	Holly Springs Engineering Planning & Zoning	Local	Completed	The Town maintains current FIRM maps and studies for the Town limits and ETJ. The Town also maintains all current land use, structure and development maps. All maps are available for the public use. This action will be removed from the next update
PEA-3	Develop Website	All	High	Holly Springs Governing Body	Local	2017	The Town maintains its own website which is able to provide up to date information for the public. The Town is continuously updating the site with additional resources. This action will be carried over as updates will need to be made to website.

Town of Knightdale Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Adopt Hazard Mitigation Plan & Updates.	All	High	Knightdale Town Council	Internal, HGMP	Upon approval by FEMA	Town Council adopted Plan Update by resolution on 8/19/2009. This update to be adopted pending approval.
P-2	Prepare Plan Maintenance Report.	All	High	Knightdale Planning	Internal	2015, Annually and update	Plan maintenance meetings have been held three of the five years since the last update.
P-3	Prepare updates to Plan.	All	High	Knightdale Planning & Advisory Committee	Internal	2015, Annually and update	No updates have been found necessary to make outside the 5-year update process.
P-4	Revise Hazard Mitigation Plan.	All	High	Knightdale Planning & Advisory Committee	Internal	2014, Every 5 years	Knightdale is actively participating in the county-led process to consolidate all Wake County jurisdictional plans.
P-5	Keep evacuation routes open.	All	High	Knightdale Public Works & Public Safety	Internal	Completed	Knightdale Public Works crews coordinate work with NCDOT and have spread salt and brine and plowed streets during winter storms, and Public Safety personnel keep traffic moving around temporary hazards and through temporarily unsignalled intersections. This action will be removed in the next update as a capability.
P-6	Maintain water supply system, including generators at booster plant	All	High	City of Raleigh Public Utilities	Internal	Completed	City of Raleigh Public Utility crews provide system maintenance per routine schedules. This action will be removed in the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-7	Maintain sewer lift stations, including generators.	All	High	City of Raleigh Public Utilities	Internal	Completed	City of Raleigh Public Utility crews provide system maintenance per routine schedules. This action will be removed in the next update as a capability.. Verify
P-8	Update Emergency Response Plan.	All	High	Knightdale Public Safety	Internal	2019	Completed, The most recent version of the Knightdale EOP was adopted by the Town Council on March 4, 2013. The town will need to review and update the EOP going forward so this action will remain in the plan.
P-9	Enforce UDO standards for development in flood hazard areas.	Flood	High	Knightdale Planning and Inspections	Internal	Completed	Knightdale Planning Department staff enforces these standards as part of the regular development approval process. This action will be removed in the next update as a capability.
P-10	Prohibit development less than two (2) feet above BFE.	Flood	High	Knightdale Planning	Internal	Completed	Knightdale Planning Department staff enforces this standard as part of the regular development approval process and permit checklists. This action will be removed in the next update as a capability.
P-11	Complete stormwater management plan and institute stormwater management program.	Flood	High	Knightdale Public Works and Engineering	Internal, FEMA, NCEM	Completed	Completed. Knightdale's Phase II permit was renewed on 12/1/2011. Budget and stormwater utility billing were instituted on July 1, 2012.
P-12	Pursue Grants to Acquire, Elevate and or Relocate Flood Prone Structures and Property.	Flood	High	Knightdale Planning	Internal	As needed when funding is available, 2019	This has not been necessary sine there have been no affected structures and/or property.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-13	Require floodproofing and/or removal of structures requesting substantial improvement.	Flood	High	Knightdale Planning and Inspections	Internal	Completed	Revised. This has not been necessary since there have been no requests, but the Town Engineer monitors this through the Town's floodplain development permitting process and inspects property prior to issuance of a CO. This action will be removed in the next update as a capability.
P-14	Maintain list of all structures located within the floodplain.	Flood	High	Knightdale Planning	Internal	Completed	Completed. As of February 2012, the Town maintains the FEMA floodplain maps and impervious surface areas such as building footprints within its GIS system.
P-15	Require burial of power lines for new developments.	Hurricanes, Tornadoes, Winter Storms/ Freezes	Moderate	Knightdale Planning	Private	Completed	Per the Town's UDO, power lines along new streets are required to be placed underground. This standard is enforced through development review and permitting processes. This action will be removed in the next update as a capability.
P-16	Require new construction to comply with wind section of Building Code.	Hurricanes, Tornadoes	High	Knightdale Inspections	Internal	Completed	Inspectors for Knightdale require compliance with the Code through the building permit process. This action will be removed in the next update as a capability.
P-17	Establish post-disaster clean-up procedures.	Hurricanes, Tornadoes, Winter Storms/ Freezes	High	Knightdale Public Works	Internal	Fall 2014	In progress. Rather than set up its own procedures, Knightdale is working with Wake County to piggyback on theirs, and it is expected to be finalized sometime during Spring 2014.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-18	Prepare debris removal and disposal plan.	Hurricanes, Tornadoes, Winter Storms/ Freezes	Moderate	Knightdale Public Works	Internal, FEMA, NCEM	Fall 2014	In progress. Public Works employees and temporarily contracted workers currently oversee debris removal and disposal. This will also be part of the joint procedures and plans with Wake County that will be finalized during Spring 2014.
P-19	Complete the Dempsey E. Benton Water Treatment Plant.	Drought	High	City of Raleigh Public Utilities	Internal	Completed	Completed. City of Raleigh Public Utilities completed and opened the Benton WTP in May 2010.
P-20	Protect and Obtain Land for the Little River Reservoir.	Drought	Moderate	City of Raleigh Public Utilities	Internal	2019	In progress. City of Raleigh has completed the purchase of land necessary for the future construction of the reservoir but the reservoir has not been built.
Public Education and Awareness							
PEA-1	Distribute "Ready Wake" brochures in libraries, Town Hall, public places and on the Town Web Site.	All	Moderate	Knightdale Communications Director	Internal	2015	Knightdale hired a Communications Director in 2013 to oversee these efforts. That office monitors brochure availability with assistance from Parks and Recreation Department and will work to distribute public information via a number of channels.
PEA-2	Inform public of construction requirements in hazard areas.	All	Moderate	Knightdale Building/ Inspections	Internal	Completed	Brochures are maintained and made available to the public and clients are advised by inspectors during the building permit process. This action will be removed in the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-3	Require disclosure of flood hazard in real estate transactions.	Flood	Moderate	Knightdale Planning	Internal	Completed	Planning staff ensure flood hazards are shown on recorded plats through the development review process and permitting checklists. This action will be removed in the next update as a capability.
PEA-4	Present Plan at public meeting.	All	Moderate	Knightdale Planning	Internal, HMGP	2014	In progress. There has been no plan update to present since 2009; however, updates will be presented as part of the new updates process in 2014.
PEA-5	Post plan maintenance report for public comment.	All	Moderate	Knightdale Communications Director	Internal	Completed	Knightdale hired a Communications Director in 2013 to oversee these efforts. To date, no formal reports have been produced from the three update meetings due to lack of significant updates. This action will be removed in the next update as a capability.
PEA-6	Post copy of Plan on website, in Town Hall.	All	Moderate	Knightdale Communications Director	Internal	Upon approval by FEMA	Knightdale hired a Communications Director in 2013 to oversee these efforts; however, the Planning Department posted the 2009 plan to the Town website following its adoption on 8/19/09. This action will be removed in the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-7	Monitor areas known to flood. Directly contact affected property owners by phone or in person.	Flood	Low	Knightdale Engineering and Public Works	Internal	Completed	Engineering and Public Works staff monitor stormwater channels following locally significant events and make needed improvements via the new stormwater utility fund. This action will be removed in the next update as a capability.
PEA-8	Make flood maps available to the public.	Flood	Moderate	Knightdale Planning	Internal	Completed	Knightdale Planning staff work with Wake County and City of Raleigh GIS departments to make maps available through the online "iMaps" application. Planning staff also maintain printed copies for local public inspection. This action will be removed in the next update as a capability.
PEA-9	Distribute "Ready Wake" storm preparation brochures and post on the Town website.	Hurricane	Low	Knightdale Administration	Internal	Deleted	Deleted. Duplicate of PEA-1.
PEA-10	Utilize electronic newsletter to keep citizens informed.	All	Low	Knightdale Communications Director	Internal	2015	Knightdale hired a Communications Director in 2013 to oversee these efforts. The Town's new website Content Management System has various mass communication methods including email blasts and emergency information pop-ups.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-11	Keep website updated with latest storm and emergency response information.	All	Low	Knightdale Communications Director	Internal	Completed	Knightdale hired a Communications Director in 2013 to oversee these efforts. The Town's new website Content Management System has various mass communication methods including email blasts and emergency information pop-ups. This action will be removed in the next update as a capability.
PEA-12	Keep website updated with latest information on drought, water restrictions and water conservation techniques.	Drought	Low	Knightdale Communications Director	Internal	Completed	Knightdale hired a Communications Director in 2013 to oversee these efforts. The Town's new website Content Management System has various mass communication methods including email blasts and emergency information pop-ups. This action will be removed in the next update as a capability.
PEA-13	Develop a policy for the installation of warning signs concerning lightning, hail and thunderstorms at outdoor public facilities and begin retro-fitting existing spaces.	Hail and Lightning	Moderate	Knightdale Parks & Recreation	Internal	2017 – Adopt Policy 2020 – Complete retrofit of existing facilities	New strategy.
PEA-14	Improve drought monitoring and communication of data to the public by relying less on state and regional data and establishing a local source.	Drought	Low	Knightdale Communications Director	Internal, Grants, Local TV Partnership	2019 – Install local weather gauges near Town Hall 2020 – Make daily readings available to the public	New strategy.
PEA-15	Expand the Town's existing fire/smoke alarm program for retro-fitting older structures to include CO alarms.	Winter Storms/ Freezes	Low	Knightdale Fire	Internal, Grants	2016 – Update program guidelines, alarm specifications and policies	New strategy.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-16	Have a Town staff member that is a Certified Floodplain Manager.	Flood	Moderate	Knightdale Engineering/Public Works	Internal	2018 – Staff member certified	New strategy.
PEA-17	Issue an annual local proclamation for Severe Weather Awareness Week and conduct associated promotional activities.	All	Moderate	Knightdale Fire	Internal	March, 2016 – Hold first annual event	New strategy.
PEA-18	Incentivize the use of cool roofing products through the Town’s Water Allocation Policy point system.	Extreme Heat	Low	Knightdale Planning	Internal	2017 – Establish appropriate level of incentive within policy	New strategy.
PEA-19	Update current approved plant list to add emphasis on drought tolerant species.	Drought	Moderate	Knightdale Planning	Internal	2016 – New plant list made available	New strategy.

Town of Morrisville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Improve road visibility and safety by evaluating existing road conditions and paving and/or placing new reflector tape or paint along road edges and in the divided line on all major Town roads.	Flooding, Hurricane, Tornado/ Thunderstorm	Low	Morrisville Director of Public Works	Morrisville Director of Public Works	2016	The town hires an outside firm to perform a Pavement Condition Report on all Town roads every two years. Deficiencies are recorded, and a prioritized schedule on needed repairs is documented.
P-2	Evaluate and update the Town of Morrisville Multi-Hazard Emergency Response Plan on an annual basis.	All	Low	Morrisville Director of Community Services	Morrisville Director of Community Services	2015, Annually	No updates were required in 2013. The town will continue to annually update and review this plan in the future.
P-3	Monitor trees and branches in public areas at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property or other significant structures or critical facilities in the Town.	Hurricanes, Tornado/ Thunderstorm, Severe Winter Weather	Moderate	Morrisville Director of Public Works	Morrisville Director of Public Works	Completed	The Town's Public Works Department regularly inspects Town parks, grounds and right of ways for hazardous trees and/or limbs. If trees or limbs have the potential of causing harm or property damage they are removed. Public Works performs approximately four inspections annually. This action will be removed from the next update.
P-4	Maintain all tax parcel information, floodplain locations and frequent flooding areas in Geographic Information Systems (GIS).	Hurricanes, Tornado/Thunderstorms, Flood	Low	Morrisville Senior Planner/Mapping Specialist, Civil Engineer	Morrisville Senior Planner/Mapping Specialist, Civil Engineer	2015, annual review and update	Tax parcel information and floodplain maps have been maintained, and no new flood areas have been identified. Current funding for this policy is adequate. This information will need to be updated on an annual basis.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-5	Evaluate and update the current floodplain ordinances and policies.	Flood	High	Morrisville Planning Director, Town Engineer	Morrisville Planning Director, Town Engineer	Completed	The Town's floodplain management ordinance was integrated in the Unified Development Ordinance (UDO), which was adopted December 10, 2013 with an effective date of July 1, 2014.
P-6	Develop a Debris Management Plan, in conjunction with Wake County's Debris Management Plan, to address debris associated with natural hazards.	All	Moderate	Morrisville Director of Community Services, Director of Public Works	Morrisville Director of Community Services, Director of Public Works	Completed	A Debris Management Plan was developed in 2010. This policy is complete.
P-7	Explore amending the Zoning and/or Subdivisions Ordinances to require all utilities to be placed underground for all new projects and major amendments to existing projects.	Hurricanes, Tornado/ Thunderstorm, Severe Winter Weather	Moderate	Morrisville Planning Director	Morrisville Planning Director	Completed	The Unified Development Ordinance (UDO), which was adopted December 10, 2013 with an effective date of July 1, 2014, requires all new developments to install electric distribution feeder lines and all other utility lines located on the development site and/or along the public right-of-way abutting the site to be installed underground (Section 5.11.B.2, Underground Installation of Required in the UDO). This policy has been met.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Property Protection							
PP-1	Evaluate the need and the cost of purchasing records protection services for information technology related services.	Flooding, Hurricanes, Tornado/ Thunderstorm, Wild-fire	Low	Morrisville Director of Information Technology	General Fund	Completed	A full tape backup of all data from all servers is captured every Sunday night. Each subsequent night, any data that has changed is also backed up to tape. Tapes are stored in a fire proof safe in the Town Hall server room, and additional sets are secured off-site with Iron Mountain. This action will be removed from the next update.
PP-2	Seek Federal, State, and County funding opportunities to purchase property located completely or partially in FEMA designated floodplains in order to mitigate potential property damage and protect natural resources.	Hurricanes, Flooding, Tornado/ Thunderstorm	Low	Morrisville Director of Community Services, Director of Development Services	Federal, State and County Funds	2018	The Town has not sought Federal, State, or Wake County funding to purchase property or land that is completely or partially located in FEMA designated floodplain. The town will look to implement this action in the future where funding allows.
Natural Resource Protection							
NRP-1	Explore the possibility of promoting or requiring xeriscaping as a water conservation measure.	Drought/Heat Wave	Low	Morrisville Planning Director	General Fund	Completed	The Unified Development Ordinance (UDO), which was adopted December 10, 2013 with an effective date of July 1, 2014, encourages the use of drought-tolerant vegetation native to the Morrisville. This policy has been met.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-2	Evaluate expanding the riparian buffer from 50 to 100 feet.	Hurricanes, Flooding, Tornado/Thunderstorm	Low	Morrisville Planning Director	General Fund	Completed	The Unified Development Ordinance (UDO), which was adopted December 10, 2013 with an effective date of July 1, 2014, allows development to occur in a manner that meets the intent of this Ordinance, yet through an alternative design that does not strictly adhere to the Ordinance's design standards.
Structural Projects							
SP-1							
Emergency Services							
ES-1	Monitor the status of backup generators, communications and vehicles for all Morrisville owned critical public facilities. Test generators, communications equipment and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations. Purchase and repair equipment as necessary.	All	Low	Morrisville Director of Public Works, Fire Chief, Police Chief	Part of normal town duties, General Fund	Completed	To ensure critical public facilities are able to respond during a disaster, the Town tested generators a minimum of once a month and provided bi-annual maintenance and load tests. Town emergency communication equipment and vehicles are used and maintained year round. The Director of Information Technology should likely be removed as a responsible party during the next 5-year update process.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Public Education and Awareness							
PEA-1	Disperse via the Morrisville Connection newsletter a posting which provides information regarding natural hazard emergency response and preparedness actions the public can take.	Drought/Heat Wave, Flood, Hurricane, Severe Winter Weather	Low	Morrisville Public Information Officer	Part of normal town duties, General Fund	2019	ReadyWake! Emergency Notification System - We informed our residents that we switched to ReadyWake as our emergency notification system. The article encourages residents to sign up to receive emergency notifications. The town will continue to develop new ways to reach out to the public in the future.
PEA-2	Notify citizens of the public hearing on the Hazard Mitigation Plan annual progress report.	All	Low	Morrisville Planning Director	Part of normal town duties, General Fund	2015, Annually	Staff placed an ad in the News and Observer to notify residents of the public hearing. While the current funding is adequate for this policy, staff recommends changing the notification from a legal ad in the newspaper for annual updates to the Town website, Twitter, Facebook, the Morrisville Connection, and/or other media resources that reach a larger audience.
PEA-3	Continue providing website link to Federal and State Declared Emergencies affecting the Town.	All	Low	Morrisville Public Information Officer	Part of normal town duties, General Fund	During a disaster event	Through 2014, when Federal or State Declared Emergencies are made, the website is updated.
PEA-4	Continue advertising the Town of Cary's Water Conservation and Restriction Plans on the Town website.	Drought/Heat Wave	Low	Morrisville Public Information Officer	Part of normal town duties, General Fund	Completed	The Morrisville Connection, which is available on the Town website, provides information from the Town of Cary.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-5	Continued participation in CodeRED, an automated citizen alert system that notifies the public of pending emergencies and actions necessary to take in response to a particular emergency.	All	Moderate	Morrisville Director of Community Services, Fire Chief	General Fund	Completed	The Town transitioned from CodeRED to ReadyWake! in December 2012. ReadyWake! is offered by Wake County and provides the same function as CodeRED.
PEA-6	Utilize volunteer citizen committees, such as CERT or Public Safety Committee, to educate residents in preparing for natural hazards.	All	Low	Morrisville Fire Chief and Police Chief	General Fund	2016	CERT members received monthly training in 2013. The training topics included general emergency/disaster preparedness and response, along with fire safety. Morrisville had 35 active CERT members in 2013. The town will look to enhance the participation of citizens on CERT in the years to come.

City of Raleigh Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Include annual capital budget for the City for ongoing program of stormwater infrastructure improvements. \$23.6 million over 10 years.	Flood	Moderate	Raleigh Public Works	Local	Completed	This item has been completed. The fiscal year 2013-14 stormwater capital improvement plan includes \$70,000,000 over 10 years for stormwater infrastructure improvements. This action will be removed from the next update.
P-2	Establish a Lake Preservation Policy that encourages private property owners to preserve existing lakes and ponds, and in certain circumstances provides for public assistance.	Flood	Moderate	Raleigh Public Works	Local	2016	Four lake projects are currently under design and construction is projected to be complete on most of these by 2016. While these projects involve water quality benefits, most of these projects involve dam and spillway upgrades (to a higher design storm frequency) that provide additional protection to downstream areas and to avoid dam failures.
P-3	Develop ongoing multi-year program of detailed basin studies for each watershed in City's jurisdiction. Fifteen basin studies are complete with 10 additional studies budgeted in the capital program. (CRS 410).	Flood	Moderate	Raleigh Public Works	Local	2016	We have broken down the city into three main basins. One basin (Walnut Creek) has been completed with the other two being completed by 2016.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-4	Planning Commission to consider program to develop future conditions floodplain mapping for all FEMA mapped areas (this is already done for non-FEMA mapped areas). The program would consist of a multi-year capital program for mapping for all FEMA streams in the ETJ and consideration of changes to development regulations in these areas. Future conditions would be based on expected development per the Comprehensive Plan and zoning maps.	Flood	Moderate	Raleigh Public Works	Local	2014	Maps have been approved, State will be going public with the maps.
Property Protection							
PP-1	Develop ongoing program designed to utilize Federal grant resources to assist private property owners in relocating existing structures out of flood hazard zones. (CRS 500/510/520)	Flood	Moderate	Raleigh Public Works	Local Federal	2019	The city has been approved for multiple grants and removed these structures from the floodplain. The city will continue to try to secure funding for these types of projects in the future.
PP-2	Develop an ongoing program designed to utilize Federal grant resources to assist private property owners in elevating existing structures located within flood hazard zones. (CRS 510/530)	Flood	Moderate	Raleigh Public Works	Local Federal	2019	The City has applied for grants, but has been unsuccessful in obtaining grant assistance for these type projects. The City also has reserved dollars from the stormwater utility fund to supplement potential grant funding and this funding in the Capital Improvement Program is estimated to average approximately \$250,000 per year. The city will continue to try to secure funding for these types of projects in the future.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PP-3	Develop an ongoing program designed to utilize Federal grant resources to assist private property owners in renovating and retrofitting existing structures in flood hazard zones to reduce vulnerability to flooding damage.	Flood	Moderate	Raleigh Public Works	Local Federal	2019	The City has applied for grants, but has been unsuccessful in obtaining grant assistance for these type projects. The City also has reserved dollars from the stormwater utility fund to supplement potential grant funding and this funding in the Capital Improvement Program is estimated to average approximately \$250,000 per year. The city will continue to try to secure funding for these types of projects in the future.
PP-4	Continue sewer easement clearing and aerial main inspection/cleaning to prevent and eliminate obstructions and erosion that can lead to infrastructure failure, as required by NCDWQ regulations.	Flood	High	Raleigh Public Works	Local	Completed	Easements are regularly inspected and mowed. The aerial mains are inspected quarterly. This action will be removed in the next update as a capability.
PP-5	Require dedication of floodplain property for greenways upon development of property for residential purposes. (CRS 420)	Flood	Moderate	Raleigh Parks and Recreation	Local	Completed	The city requires dedication of floodplain property for greenways upon development of residential property. This action will be removed in the next update as a capability.
PP-6	Revise Comprehensive Plan to consider expanding greenway corridor widths and additional environmental protections for floodplains. (CRS 420)	Flood	Moderate	Raleigh Parks and Recreation, Public Works, and DCP	Local	Completed	The Comprehensive Plan has been revised to expand greenway corridors and added environmental protections for floodplains. This action will be removed in the next update as a capability.
PP-7	Neuse River Master Plan calls for the use of easements, donor gifts, grants, inter-local agreements, public/private partnerships, wetlands mitigation funds, and leases to protect corridor along the entire Neuse River. (CRS 420)	Flood	Moderate	Raleigh Parks and Recreation	Local	Completed	\$1 million in 5-year CIP to develop Horseshoe Farm Park. This action will be removed in the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PP-8	When the City's -initiated annexation areas extra-territorial jurisdiction is expanded, or when areas outside the extra-territorial jurisdiction are annexed into the City, initially zone all 100-year floodplain areas to Conservation Buffer zoning district, which restricts development to very limited uses. (CRS 430LZ)	Flood	Moderate	Raleigh Planning	Local	Completed	This policy is active and in place so this action will be removed in the next update as a capability.
Natural Resource Protection							
NRP-1	Develop local program to enforce Erosion and Sedimentation Control standards. Local sedimentation control program complements state program. Eleven staff positions dedicated to this program.	Flood	High	Raleigh Public Works	Local State	Completed	The sedimentation program has been assessed over the last two years and has resulted in improvements in the inspections process, consistency of inspections, plan reviews, and coordination between plan reviewers and inspectors. This action will be removed in the next update as a capability.
Structural Projects							
SP-1	Management and repair of reservoirs, retention and detention basins	Flood	High	Raleigh Public Works	Local	Completed	Program to implement repairs and replacement of stormwater infrastructure in parks, roadways and other public property has been implemented. This action will be removed from the next update as a capability.
Emergency Services							
ES-1	Provide and enhance technical rescue capabilities more equitably throughout the City.	All	High	Raleigh Fire	Local	2018	Technical rescue capabilities have been enhanced more equitably throughout the city, but the city would like to continue to improve this by expanding resources, so this will be pursued going forward.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-2	Provide after-action report of emergency response to severe weather events in order to improve planning for future disasters.	All	High	Raleigh Fire and Emergency Management	Local	Post Event	The city completes after action reports as soon as possible post-event. This action will be removed in the next update.
ES-3	Maintain a standard operating guideline to direct operational planning prior to anticipated weather emergencies.	All	High	Raleigh Fire and Emergency Management	Local	2015, Annual review and update	The city maintains an SOG that is put into place prior to weather emergencies. This SOG is reviewed and updated annually, so this action will remain in the plan going forward.
ES-4	Design GIS programming capable of providing real-time data to emergency managers and historic data for future emergency response planning.	All	High	Raleigh City Manager and Information Technology	Local	2019	A GIS program that can provide real-time data has been developed, but there is still a great deal of work to be done on the system to make it more useful, so the city will continue to try to advance the system.
ES-5	Provide urban search and rescue services consisting of structural collapse and similar emergencies.	All	High	Raleigh Fire	Local State	Completed	USAR services consist of response to structural collapse and similar emergencies. Training occurs at least annually. This action will be removed from the next update as a capability.
ES-6	Continue Walnut Creek and Swift Creek dam warning systems from Lakes Johnson, Raleigh, Wheeler and Benson to the Neuse River. (CRS 610/630)	Flood	High	Raleigh Public Utilities	Local	Completed	The warning systems for Lakes Benson, Wheeler, Johnson and Raleigh are in service. This action will be removed from the next update as a capability.
ES-7	Deploy semi-tractor with Low-Boy Conex trailers for transportation of emergency barricades and other equipment on a large scale.	All	Moderate	Raleigh Police	Local	Deleted	Delete Conex trailers...these are large storage trailers.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-8	Continued use and testing of USGS automated flood warning system and automated reporting on creeks and rivers, e.g., Crabtree Creek. (CRS 610)	All	High	United States Geological Survey	Federal	Completed	Upon notification of rising creeks and possible flooding, units are sent to check visually every 30 minutes for level readings. Note the USGS stream gage data is now available at 15 minute intervals during floods via telephone or the internet. Stormwater staff routinely provides the Command Center staff this information. USGS tests the system every 6 weeks. If schools become threatened, Wake County School Security implements written evacuation plan. This action will be removed from the next update as a capability.
ES-9	ECC Notifications BY NOAA for possible severe weather (tornados, ice, etc.).	All	High	National Oceanic and Atmospheric Administration	Federal State	Completed	ECC is notified by both agencies when weather alerts are issued. Information then broadcast over police radios. This action will be removed from the next update as a capability.
ES-10	ACU 1000 Communications Unit – Currently being tested. System should allow all agencies on ACU 1000 to communicate using own radios and frequencies.	ALL	Moderate High	Raleigh Police	Local	Completed	First responders now utilize the 800 mhz system and can communicate State-Wide with agencies utilizing that system. The ACU 1000 is also operational and can be used for agencies not on the 800 system. This action will be removed from the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-11	Develop Water Emergency Response Plan in accordance with EPA mandate with wastewater emergency plan developed voluntarily.	All	High	Raleigh Public Utilities	Local (EPA grant)	Completed	This item was completed in 2003 and updated in 2005. The plans are regularly updated. This action will be removed from the next update as a capability.
ES-12	Continue to conduct disaster tabletop exercise program.	All	Low	Raleigh Public Utilities, Fire, Police, City Manager, Emergency Management, and Public Works	Local	2015, Annual review and update	Tabletop disaster exercises are held regularly and will need to be updated and evaluated to ensure applicability to appropriate hazards. The city will conduct and review exercises on at least an annual basis.
ES-13	Program to install emergency electrical generators at all public utilities facilities. Current focus on redundant generators at critical facilities, second fuel truck and completion of 100% generator coverage in Garner area.	All	High	Raleigh Public Utilities	Local	2017	Emergency electrical generators have been installed at public utilities facilities including wastewater pump stations, water booster pump stations, water treatment plants, and the wastewater treatment plants, except for the pump stations in Wake Forest. Installation of emergency generators at the pump stations in Wake Forest is under way as part of the merger capital improvements plan. Redundant electrical generators have been installed at the critical facilities including the NRWWTP influent pump station, NRWWTP UV disinfection facility, and the Walnut Creek Lift Station

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-14	Critical Security Post Coverage - Certain fixed sites identified for coverage during disasters - water treatment, municipal complex, wastewater treatment, etc.	All	Low	Raleigh Police	Local	Completed	Vulnerable business and offices have been identified and are contacted in the event of rising waters. Duplicate of ES-14, so action is complete and will be removed from next update.
ES-15	Mobile Command Post equipped to communicate with all agencies in the Triangle including Emergency Management, State agencies, fire departments, etc.	All	Moderate	Raleigh Police	Local	Completed	Mobile Command Post is available 24 hours a day and is equipped to communicate with all agencies in the Triangle including Emergency Management, State agencies, fire departments, etc. This action will be removed from the next update as a capability.
ES-16	Develop drought preparedness and response program that includes conservation regulations, enforcement programs, and preliminary arrangements for alternate sources of water supply.	Drought	Moderate	Raleigh Public Utilities	Local	Completed	Water conservation plan and drought response plan are in place. Retention of existing water (swimming pools, newly developed cistern system, and non-potable water containment system) This action will be removed from the next update as a capability.
ES-17	Develop Emergency Response plans for buildings	All	Low	Raleigh Police	Local	Completed	Emergency Response plans are all designed for officers to be assigned for security purposes until owners can take over the responsibility of securing premises. Progress made. Personnel will cover critical locations to the best of our ability. This action will be removed from the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-18	Participate extensively in NC water and sewer utilities mutual aid provision and system development.	All	Moderate	Raleigh Public Utilities	Local FEMA	Completed	The PUD helped develop and is a member of the NCFWARN program (NC Water and wastewater Agency Response Network) with other utilities statewide to provide mutual aid to each other. This action will be removed from the next update as a capability.
ES-19	Counseling	All	Low	Raleigh Police	Local	Completed	Police psychologist and a Critical Incident Stress Debriefing Team training to provide debriefing sessions for personnel. This action will be removed from the next update as a capability.
Public Education and Awareness							
PEA-1	Provide technical assistance to private property owners who are subject to structural flooding.	Flood	Moderate	Raleigh Public Works	Local	Completed	Conservation engineer does site inspection and reports recommendation to reduce flood damage. This action will be removed from the next update as a capability.
PEA-2	Provide flood zone information to any inquirer.	Flood	High	Raleigh Public Works	Local	Completed	Stormwater staff provides flood zone information through call-in or e-mail program to any inquirer. City requires showing flood zone information on all plats recorded in City's jurisdiction. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-3	Environmental Education	Flood	Moderate	Raleigh Public Works	Local	Completed	City maintains a stormwater web site to answer citizen questions about flood hazards, flood safety, availability of flood insurance, and various programs, operates a speakers' bureau and published a 24-page stormwater utility program brochure in 2004. (CRS 330) A Stormwater Public Education position was approved in the 08-09 budget that specifically addresses education needs in the stormwater area. This action will be removed from the next update as a capability.
PEA-4	Develop WaterFest Outreach Program (CRS 360)	All	Low	Raleigh Public Utilities	Local	Completed	Annual event draws up to 6,000 school children, plus teachers and chaperones. Focus on environmental issues, including sewer, stormwater, solid waste management, etc. in late spring. City continues to conduct this event. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-5	Partner with Wake County to utilize the “Communicator” application that will warn property owners of impending flood events. (CRS 610)	Flood	Moderate	Raleigh Information Services and Information Technology	Local	Completed	The City partners with Wake County to utilize the “Communicator” application that utilizes GIS technology to develop automated call lists to warn property owners of impending flood events. (CRS 610) The communicator application is now available for city use. This action will be removed from the next update as a capability.
PEA-6	Institute “Stormwater hotline” (CRS 360)	Flood	Moderate	Raleigh Public Works	Local	Completed	City maintains a stormwater hotline which is answered extended hours during the week. Citizens may report flooding problems, pollution issues, erosion problems, infrastructure damage. City continues to maintain the hotline. This action will be removed from the next update as a capability.
PEA-7	When available, the City will incorporate and use new LIDAR flood maps. Information will be available to the public. (CRS 320/440)	Flood	Moderate	Raleigh Public Works	Local	Completed	New maps have been adopted as the updated FEMA flood insurance rate map. This action will be removed from the next update as a capability.
PEA-8	City will continue to maintain flood elevation certificates and make copies available to the public. (CRS 310/440)	Flood	Moderate	Raleigh Inspections	Local	Completed	City continues to maintain certificates and make copies available to public. This action will be removed from the next update as a capability.
PEA-9	City will continue to update flood hazard maps to reflect new subdivisions, changes in corporate limits, and any new DFIRM data. (CRS 320/440)	Flood	Moderate	Raleigh Public Works, Inspections, and Planning	Local	Completed	City continues to update the maps. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-10	The city will leverage the State of NC Residential Property Disclosure Statement which includes check off on whether or not the property being offered for sale is within a Federally-designated floodplain. (CRS 340)	Flood	Moderate	State of North Carolina	State	Completed	City continues to include the check off for floodplains. This action will be removed from the next update as a capability.
PEA-11	The City will support Wake County efforts to make flood protection educational materials available in all branches of the Wake County public library system. (CRS 350).	Flood	Moderate	Wake County	County	Completed	City continues to supply local libraries with educational information. This action will be removed from the next update as a capability.

Town of Rolesville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	UDO: Continue to provide stream and creek buffers, and floodplain and wetland protection.	Flood	High	Rolesville Planning	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
P-2	UDO: Resource Conservation Areas (RCA) – Continue to protect floodplains, streams, and creeks.	Flood	High	Rolesville Planning	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
P-3	UDO: Subdivision Standards – Continue to provide protection for residential areas by not allowing residential lots in the floodplain.	Flood	High	Rolesville Planning	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
P-4	UDO – Ensure buildings are minimum 2' above base flood elevation.	Flood	High	Wake County	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
P-5	UDO: Flood Damage Prevention Overlay District – Continue to restrict and prohibit uses which are dangerous to health, safety, and property. Uses vulnerable to floods are protected.	Flood	High	Rolesville Planning	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
P-6	UDO: Flood Damage Prevention – Ensure control is provided for filling, grading and dredging within floodplains by working with necessary State and Federal Agencies.	Flood	Moderate	Rolesville Planning and Town Manager	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
P-7	Ensure road standards maintained in disaster preparation for possible use as evacuation routes.	All	Moderate	Rolesville Planning	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-8	Provide adequate water supply through storage and interconnection with other public water systems.	Drought	Moderate	City of Raleigh	Local	Completed	As of 2014, the City of Raleigh maintains all water and sewer facilities as part of their greater system. This action will be removed in the next update.
P-9	Provide backup power for all critical public facilities (wastewater treatment plant, sewer pump stations, Public Works and Utilities building, and other critical public buildings).	All	Moderate	City of Raleigh	Local	2019	As of 2014, the City of Raleigh maintains all water and sewer facilities as part of their greater system. The town will continue to identify facilities that need backup power
P-10	Maintain major town transportation routes through snow and ice removal contracts and equipment.	Severe Winter Storms	Moderate	Rolesville Administration	Local	Completed	As of 2014, the town maintains standing contracts for snow and ice removal when necessary. This action will be removed in the next update.
P-11	Require Engineered Storm Water Control Structures where necessary.	Flood	Moderate	Rolesville Planning	Local	Completed	Since 2010, the town has partnered with Wake County to adopt a comprehensive storm water ordinance. Wake County reviews all development for compliance. This action will be removed in the next update.
P-12	Town regularly backs-up information pertaining to Town government in case of an emergency.	All	Moderate	Rolesville Town Manager	Local	Completed	As of 2014, the town continues to back up electronic information on a regular basis. This action will be removed in the next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-13	Transportation Plan – Continue to address disaster preparedness (evacuation) through road interconnectivity, paved roads, and widening of roads.	All	Moderate	Rolesville Planning	Local	2017	From 2010 to 2014, several new streets have been built and many others have been resurfaced. Going forward, roads will continue to be evaluated for their use in disaster preparedness and the Transportation Plan will be updated accordingly.
Natural Resource Protection							
NRP-1	UDO: Continue to require engineered stormwater controls including stream and wetland protection.	Flood	Moderate	Local	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
NRP-2	UDO: Flood Damage Prevention Overlay District - continue to prohibit any development in floodway to protect floodplains and wetlands.	Flood	Moderate	Local	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
NRP-3	Develop Open Space Ordinance to protect wildlife habitat.	All	Moderate	Local	Local	Completed	As of 2014, this policy is still in effect and any new development is subject to this policy. This action will be removed in the next update.
NRP-4	UDO: Incorporate regulations for illicit discharge control in Phase II Stormwater Management Plan.	Flood	Moderate	Local	Local	Completed	Since 2010, the town has partnered with Wake County to adopt a comprehensive storm water ordinance. Wake County reviews all development for compliance. This action will be removed in the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
NRP-5	UDO -Stream Dumping – Through the NPDES Phase II Stormwater program, the Town will design and implement an illicit discharge program which will enforce regulations against illegal stream dumping.	Flood	Low	Local	Local	Completed	Since 2010, the town has partnered with Wake County to adopt a comprehensive storm water ordinance. Wake County reviews all development for compliance. This action will be removed in the next update.
Emergency Services							
ES-1	Emergency Operations Command Post Center – established when natural hazard is imminent. Center coordinates evacuations, sheltering, staging areas for equipment, manpower, and needed supplies. Equipment includes internet access, telephone, wireless communications, radio and backup supplied by emergency batteries and/or generators.	All	High	Rolesville Town Manager, Fire, EMS, and Police	Local	Completed	As of 2014, the EOCPC is still maintained and operated out of the Rolesville Rural Fire Dept. station as needed. This action will be removed in the next update.
ES-2	Ongoing provision of emergency assistance as needed.	All	High	Rolesville Fire, EMS, and Police	Local	Completed	As of 2014, these actions are ongoing as they occur daily. This action will be removed in the next update.
ES-3	Ensure hazard warning methods include television, radio, internet and, if needed, emergency vehicles with loud speaker systems.	All	Moderate	Rolesville Fire, EMS, and Police	Local	Completed	As of 2014, website, telephone (Reverse 911), and email notifications currently available from the Town. This action will be removed in the next update.
ES-4	Maintain open lines of communication between all branches of emergency response personnel.	All	Moderate	Rolesville Fire, EMS and Police	Local	Completed	As of 2014, these actions are ongoing as they occur daily. This action will be removed in the next update.
ES-5	Prepare for emergency situations – weather station, local weather warning system, and emergency management.	All	Moderate	Rolesville Fire	Local	Completed	As of 2014, these actions are ongoing as they occur daily. This action will be removed in the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-6	Standard Operating Guidelines – collection of procedures to be followed during emergencies.	All	High	Rolesville Fire	Local	Completed	As of 2014, these actions are ongoing as they occur daily. This action will be removed in the next update.
ES-7	Continue Pre-Fire Incident Plan program for all commercial facilities within the Town limits.	All	High	Rolesville Fire	Local	Completed	As of 2014, these actions are ongoing as they occur daily. This action will be removed in the next update.
ES-8	Maintain contact information for local businesses in case of an emergency.	All	High	Rolesville Fire	Local	Completed	As of 2014, these actions are ongoing as they occur daily. This action will be removed in the next update.
ES-9	Continue to evaluate and improve response and recovery methods following each hazard event.	All	High	Rolesville Fire, Police, and Town Manager	Local	Completed	The town continues to evaluate and improve response and recovery methods as needed. This action will be removed in the next update.
ES-10	Health and safety maintenance – provide assistance with security and post storm clean-up.	All	High	Rolesville Fire, Police, and Town Manager	Local	Completed	As of 2014, assistance is provided as needed. This action will be removed in the next update.
ES-11	Post disaster response – building inspections personnel will respond as needed.	All	Moderate	Wake County	Local	Completed	Wake County inspections will continue to provide personnel and inspections as needed for disaster response. This action will be removed in the next update.
ES-12	Counseling – Police psychologist and Critical Incident Stress Debriefing Team training to provide debriefing sessions for personnel.	All	High	Rolesville Public Safety	Local	Completed	As of 2014, assistance is provided as needed. This action will be removed in the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Public Education and Awareness							
PEA-1	Town website - develop hazard mitigation section covering such items as public access, evacuation routes, emergency contact numbers, and detailed weather reports in case of emergency,	All	Moderate	Rolesville Administration	Local	2016	Since 2010, the Town's website has been updated substantially to include some, but not all, of these items. The town will work to update the website with other items in the future.
PEA-2	Hazard Disclosure – Maintain geographic information systems (GIS) map to increase public awareness of known hazard locations.	Flood	Moderate	Rolesville Planning	Local	Completed	The Town's GIS library is continually updated with data from Wake County. These updates will continue monthly and as needed. This action will be removed in the next update.
PEA-3	Develop planned park to include nature trails and environmental education center.	Flood	High	Rolesville Town Manager	Local Wake County	2019	As of 2014, Mill Bridge Nature Park (with trails) is open to the public. Funding for the education center has not yet become available.
PEA-4	Town Hall – Maintain and update hazard information accessible to the public.	All	Moderate	Rolesville Planning	Local	2016	As of 2014, a copy of the town's hazard mitigation plan is maintained online as well as hardcopy (at town hall) for public viewing. The town will look to improve public education and information sharing through additional channels.
PEA-5	Continue to provide flood maps for public use with staff continuing to be available for public assistance.	Flood	High	Rolesville Planning	Local	Completed	As of 2014, FIRM maps are available at town hall for review and planning staff are always available for public assistance during regular business hours (8am-5pm M-F). This action will be removed in the next update.

Town of Wake Forest Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Consider preventing all unnecessary development in the flood plains.	Flood	High	Wake Forest Planning	Local	Completed	The town prevents all unnecessary development in the floodplain through regulation. This action will be removed from the next update.
P-2	Examine and modify, if needed, policies and procedures for utility stream crossings.	All	High	Wake Forest Engineering	General Fund	Completed	Through 2014, the town has examined and modified procedures for stream crossings so this action has been completed and will be removed from the next update.
P-3	Prepare a Storm Drainage Master Plan to include all storm drainage, infrastructure, and capacity analysis.	Flood	High	Wake Forest Engineering	General Fund	2017	A Storm Drainage Master Plan has been developed to include drainage, infrastructure and capacity analysis. However, this plan will need to be reviewed and updated going forward so the action will remain in the plan.
P-4	Maintain inventory of dams.	Dam Failure	High	Wake Forest Engineering	General Fund	Completed	An inventory of dams has been built and is updated when necessary. This action will be removed from the next update.
P-5	Maintain clear right-of-ways by removing fallen trees.	Flood, Hurricane, Thunderstorm	High	Wake Forest Power	Electric Fund	Completed	Fallen trees are cleared as quickly as possible so that right of ways can be maintained. This action will be removed from the next update as a capability.
P-6	Ensure that as many electric lines as possible are looped.	Flood, Hurricane, Thunderstorm	High	Wake Forest Power	Electric Fund	Completed	Electric lines are looped whenever possible. This action will be removed from the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-7	Ensure that underground equipment is installed above the flood plain.	Flood, Hurricane, Thunderstorm	High	Wake Forest Power	Electric Fund	Completed	No development is permitted in floodplains by ordinance. This action will be removed from the next update as a capability.
P-8	Enforce burn bans and the littering ordinance regarding the discarding of cigarette butts during times of drought.	Wildfire	High	Wake Forest Police	General Fund	Completed	Burn bans and the littering ordinance are enforced, especially during drought periods. This action will be removed from the next update as a capability.
P-9	Update annually the hazardous material inventory, as required by law.	Hazardous Materials Incident	High	Wake Forest Inspections and Fire	General Fund, Fire Tax Revenue	Completed	The hazardous material inventory is reviewed and updated annually. This action will be removed from the next update as a capability.
P-10	Add amendments to the hazardous materials inventory as frequently as the information is available.	Hazardous Materials Incident	High	Wake Forest Inspections and Fire	General Fund, Fire Tax Revenue	Completed	Amendments have been added to the inventory very quickly in the past and this will continue to be done in the future. This action will be removed from the next update as a capability.
P-11	Obtain an inventory of hazardous material storage sites within a five mile radius of town.	Hazardous Materials Incident	High	Wake Forest Fire and/or Wake and Franklin Counties	General Fund, Fire Tax Revenue, County	Completed	An inventory of these sites has been obtained. This action will be removed from the next update as a capability.
P-12	Coordinate with Wake County and with the Wake County Plan on nuclear accident planning.	Nuclear	High	Wake Forest Fire and Police	General Fund	Completed	The town regularly coordinates with Wake County on nuclear planning. This action will be removed from the next update as a capability.
P-13	Identify high occupancy areas along US#1 which may be heavily impacted in the event of an accident along the highway.	Nuclear	Moderate	Wake Forest Fire and Police	General Fund	Completed	High occupancy areas along US 1 have been identified. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-14	Cooperate with Wake County Public Safety in developing a Terrorist Response Plan.	Terrorist Threat	High	Wake Forest Fire and Police Coordinator	General Fund	Completed	Wake County has developed a Terrorist Response Plan. This action will be removed from the next update as a capability.
P-15	Identify security issues with utilities.	Terrorist Threat	High	Wake Forest Public Works and Power	General Fund and Electric Fund	Completed	The town has identified high risk utilities and potential security issues. This action will be removed from the next update as a capability.
P-16	Security measures in effect at the new Town Hall, when completed.	Terrorist Threat	High	Wake Forest Town Administration	General Fund	Completed	The town has implemented security measures at the new town hall. This action will be removed from the next update as a capability.
P-17	Review and revise the existing response plan and call list, as needed	All	High	Wake Forest Administration	General Fund	2016	The town has reviewed and revised the existing response list. However, this list will need to be updated in the near future, so this action will remain in the plan.
P-18	Put electric distribution lines underground.	All	Low	Wake Forest Power	Electric Fund and General Fund	2019	Where feasible, electric lines have been put underground. However, there are still some lines that could be buried and the town will look into carrying that out going forward.
P-19	Require, where possible, multiple accessibility routes through proper design of the street layout.	All	High	Wake Forest Planning	General Fund	Completed	Transportation Plan updated to include multiple accessibility in many areas. Plan is being implemented.
P-20	Coordinate with nearby counties, including Franklin and Granville, as well as Wake.	All	High	Wake Forest Fire and Police and Communications	General Fund and Fire Tax Revenue	Completed	The town coordinates across several counties on many planning and EM activities. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-21	Develop a policy for preplanning before an event.	All	High	Wake Forest Public Works, Fire, Police, Administration, and Communications	General Fund and Fire Tax Revenue	Completed	The town has developed a policy for pre-planning prior to an event that coordinates with Wake County. This action will be removed from the next update as a capability.
P-22	Review and revise the existing call list, as needed.	All	High	Wake Forest Administration	General Fund	Deleted	This action has been determined not to be extremely applicable to mitigation so it was deleted
P-23	Adopt and implement a tree trimming and maintenance procedure for power lines.	All	High	Wake Forest Electric, Urban Forestry Board	Electric Fund	Completed	A tree trimming and maintenance policy was developed and is in place. This action will be removed from the next update as a capability.
P-24	Adopt and implement a policy of tree swapping (tall for understory trees under lines).	All	Moderate	Wake Forest Power, Urban Forestry Board	Electric Fund, General Fund	Completed	A policy for tree swapping has also been developed and is in place. This action will be removed from the next update as a capability.
P-25	Adopt a policy to power down before major damage is done and make the public aware of this policy.	All	High	Wake Forest Electric	Electric Fund	Completed	A policy to power down before major events and reduce the risk of major damage has been adopted and implemented. This action will be removed from the next update as a capability.
P-26	Develop and implement a policy to inspect utility poles and replace them, as needed.	All	High	Wake Forest Electric	Electric Fund	Completed	A policy to inspect utility poles prior to events has been adopted and is currently being implemented. This action will be removed from the next update as a capability.
P-27	Review problem areas, determine needs, and set priorities for putting lines underground or for relocating overhead lines.	All	High	Wake Forest Power	Electric Fund	Deleted	Similar to P-18, combine and delete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-28	Require that new development install underground wiring.	All	High	Wake Forest Planning and Power	General Fund and Electric Fund	Completed	New development is required to install underground wiring. This action will be removed from the next update as a capability.
P-29	Develop policy to include putting lines underground as other town projects are constructed.	All	High	Wake Forest Administration and Power	General Fund and various project grants	Completed	When other town projects are constructed, lines are put underground. This action will be removed from the next update as a capability.
P-30	Implement the water conservation policy.	All	High	Wake Forest Administration and Power	General Fund	Completed	The town follows City of Raleigh Policy for water conservation. This action will be removed from the next update as a capability.
P-31	Prohibit new in-ground irrigation systems that are tapped into the City of Raleigh system.	All	High	Wake Forest Inspections	General Fund	Deleted	This action was determined to not be technically feasible so it was deleted.
Structural Projects							
SP-1	Conduct stream mitigation projects on Old Mill Stream, Richland Creek, and others subject to flooding or erosion.	Erosion	Moderate	Wake Forest Engineering	General Fund, Clean Water Management Trust Fund, Ecosystem Enhancement Program	2019	Some mitigation projects have been conducted on these water bodies, but there is significant effort that is still needed to reduce potential erosion. The town will work to complete more erosion control projects going forward.
Emergency Services							
ES-1	Require lockboxes at hazardous material storage sites for the Fire Dept.	Hazardous Materials Incident	High	Wake Forest Fire	Property owners	Completed	Lockboxes are required at HazMat storage sites. This action will be removed from the next update as a capability.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-2	Forward inventory updates and amendments, along with information on risks and potential hazards, to all emergency response organizations.	Hazardous Materials Incident	High	Wake Forest Emergency Management Coordinator (Police)	General fund	Completed	Inventory updates and other information are forwarded to all emergency response organizations. This action will be removed from the next update as a capability.
ES-3	Coordinate with County school system, local school personnel, including Franklin Academy, and Wake County Public Safety Emergency Management.	All	High	Wake Forest Fire, Police, and Emergency Management Coordinator	General Fund	Completed	The town coordinates with the school system, including private schools, on emergency management issues. This action will be removed from the next update as a capability.
ES-4	Provide for primary or mobile generators to shelter sites.	All	Moderate	Wake County Emergency Management	General Fund	2018	Generators in some form are available to shelter sites. However, additional generators would be useful and will be pursued where possible.
ES-5	Coordinate with suppliers of all basic supplies for shelters.	All	High	Wake Forest Administration and Finance	General Fund	Completed	The town coordinates with suppliers to ensure that all shelters are well-equipped with the necessary supplies. This action will be removed from the next update as a capability.
ES-6	Coordinate with suppliers and develop a resource list for fuel and power generation.	All	High	Wake Forest Finance	General Fund	2016	The town coordinates with suppliers to ensure that all shelters are well-equipped with fuel and power generation. This action will be removed from the next update as a capability.
ES-7	Investigate methods of encouraging gas stations to acquire backup generators.	All	High	Wake Forest Public Works and Inspections	General Fund	2017	The town has looked into ways to encourage gas stations to acquire backup generators. In some cases this has occurred, but more work is needed to ensure adequate supply.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-8	Assess facilities for the need for emergency generation, giving consideration to alternate facility sites.	All	High	Wake Forest Public Works	General Fund	2018	The town has assessed facilities for the need for emergency generation and many facilities have been fitted with generators. However, additional facilities with emergency generation would be useful.
ES-9	Locate generators at necessary facilities, including alternate emergency sites.	All	High	Wake Forest Public Works and Public Buildings	General Fund	Deleted	Similar to ES-8, combine and delete
ES-10	See that all nursing homes and assisted living facilities have backup generators.	All	High	Property owners	Property owners	2018	Although many nursing homes and assisted living facilities have backup generators, this is still a task that remains incomplete so it will remain in the plan.
ES-11	Require, in the contract, that fuel suppliers have backup generators.	All	High	Wake Forest Administration, Finance, and Public Works	Contract holder	2018	Although many fuel suppliers have backup generators, this is still a task that remains incomplete so it will remain in the plan.
ES-12	Develop one or more clearance teams of emergency personnel, coordinating with the Wake Forest Fire Department in this process.	All	High	Wake Forest Fire and Public Works	General Fund and Fire Tax Revenue	Completed	The Fire Department has developed clearance teams to help remove downed trees and other potential debris. This action will be removed from the next update.
ES-13	Train the clearance teams and supply them with chain saws and other emergency equipment.	All	High	Wake Forest Fire and Public Works	General Fund and Fire Tax Revenue	Completed	The Fire Department has trained clearance teams to help remove downed trees and other potential debris. This action will be removed from the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-14	Follow a specified policy on the use of brine, sand, and plowing to reduce the impact of a storm.	Severe Winter Weather	High	Wake Forest Public Works	General Fund	Completed	A policy has been developed to guide the use of brine, sand, and plowing to reduce the impact of winter storms. This action will be removed from the next update.
ES-15	Implement the county-wide 800 trunking system.	All	High	Wake Forest Police	General Fund, Electric Fund	Completed	A county-wide trunking system has been developed and is in place. This action will be removed from the next update.
ES-16	Purchase necessary communication equipment.	All	High	Each department purchases their own	General Fund	Completed	Communication equipment has been purchased and is utilized by each department in the town. This action will be removed from the next update.
ES-17	Train personnel to use communication equipment.	All	High	Wake Forest Administration	General Fund	Completed	Personnel in each department have been trained to use the communication equipment. This action will be removed from the next update.
ES-18	Coordinate with the natural gas company regarding the gas supply and potential hazards after an event.	All	High	Wake Forest Fire and Police	General Fund	Completed	The natural gas company has been coordinated with concerning how to supply gas after a hazard event. This action will be removed from the next update.
Public Education and Awareness							
PEA-1	Develop or revise a procedure for communication with employees and the public, including alternatives if the existing system fails.	All	High	Wake Forest Communication	General Fund	Completed	The town has developed a system for communicating with employees and the public concerning severe weather and alternative means of contact have been developed as well. This action will be removed from the next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-2	Inform the public periodically about emergency policies.	All	High	Wake Forest Communications	General Fund	Completed	Done – Town contacts residents on call / email list when emergencies happen. This action will be removed from the next update.
PEA-3	Develop a policy and advise the public that all outside above ground LP or propane gas tanks be cut off during a major event.	All	Moderate	Wake Forest Communications	General Fund	2017	A policy is in place to advise the public of turning off propane tanks during a storm, but better outreach is needed to ensure this occurs. Therefore the town will continue to work on an outreach program.

Town of Wendell Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Prepare Hazard Mitigation Plan Update.	All	High	Wendell Advisory Committee	Internal	Completed	This is in the process currently. This action will be removed from the next update.
P-2	Prepare Multi-Jurisdictional Hazard Mitigation Plan.	All	High	Atkins and Participating Jurisdictions	Wake County Grant	August 2014	This is in the process currently. This action will be removed from the next update.
P-3	Adopt Hazard Mitigation Plan Update.	All	High	Wendell Town Board of Commissioners	Internal	Upon approval of Hazard Mitigation Plan by FEMA	Upon 2014 approval of Hazard Mitigation Plan by FEMA. This is in the process currently. This action will be removed from the next update.
P-4	Prepare Plan Maintenance Report.	All	High	Wendell Planning	Internal	Annually	This action will be removed from the next update as it is done annually.
P-5	Prepare updates to Plan.	All	High	Wendell Planning	Internal	As needed	This is in the process currently. This action will be removed from the next update.
P-6	Revise Hazard Mitigation Plan.	All	High	Wendell Advisory Committee	Internal	Every five years	Town is participating in Multi-jurisdictional HMP. This is in the process currently. This action will be removed from the next update.
P-7	Keep evacuation routes open.	All	High	Wendell Public Works and Public Safety	Internal	Completed	Evacuation routes have been established and are maintained. This is in the process currently. This action will be removed from the next update.
P-8	Maintain trees adjacent to power lines and critical facilities.	All	High	Wendell Public Works and Progress Energy	Internal and Private	Completed	Trees adjacent to power lines and critical facilities have been maintained and will continue to be monitored. This is in the process currently. This action will be removed from the next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-9	Maintain water supply system.	All	High	City of Raleigh Public Utilities	Internal	Completed	City of Raleigh Public Utility crews provide system maintenance per routine schedules. This action will be removed in the next update as a capability.
P-10	Maintain sewer lift stations, including generators.	All	High	City of Raleigh Public Utilities	Internal	Completed	City of Raleigh Public Utility crews provide system maintenance per routine schedules. This action will be removed in the next update as a capability.
P-11	Install generators as needed at lift stations.	All	High	City of Raleigh Public Utilities	Internal	2019	Generators have been installed at several lift stations, but more may be necessary looking forward. This will be evaluated and additions will be made as deemed appropriate.
P-12	Maintain Storm Drainage system.	Flood	High	Wendell Public Works	Internal	Completed	The storm drainage system is maintained. This action will be removed in the next update as a capability.
P-13	Enforce subdivision standards for development in flood hazard areas.	Flood	High	Wendell Planning and Inspections	Internal	Completed	Subdivision standards restricting development in the floodplain are in force. This action will be removed in the next update as a capability.
P-14	Further restrict development in floodplain by prohibiting development.	Flood	High	Wendell Planning	Internal	Completed	Development is prohibited in the floodplain. Implemented through UDO. This action will be removed in the next update as a capability.
P-15	Require burial of power lines for new developments.	Hurricanes, Tornadoes, Winter Storms/ Freezes	Moderate	Wendell Planning	Private	Completed	A requirement for burying power lines is in place. This action will be removed in the next update as a capability.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-16	Require new construction to comply with wind section of Building Code.	Hurricanes, Tornadoes	High	Wendell Inspections	Internal	Completed	New construction must comply with the wind section of the building code. This action will be removed in the next update as a capability.
P-17	Include flood map data on GIS system.	All	Moderate	Wendell Planning	Internal	2019	Flood map data is included on the GIS system. However, this data will need to be updated as new flood information is made available.
Natural Resource Protection							
NRP-1	Maintain and expand greenway system, stream buffers.	Flood	Low	Wendell Parks and Recreation	Internal, Private Developers	2018	Seeking funding and easements started in 2013. This action has begun, but it is not yet completed.
Emergency Services							
ES-1	Implement Disaster Notification Policy.	All	High	Wendell Public Safety	Internal	Completed	This policy has been implemented. This action will be removed in the next update as a capability.
ES-2	Adhere to Disaster Notification Policy.	All	High	Wendell Public Safety	Internal	Completed	This policy has been implemented. This action will be removed in the next update as a capability.
ES-3	Implement Community Center Use Policy.	All	High	Wendell Parks and Recreation	Internal	Completed	This policy has been implemented. This action will be removed in the next update as a capability.
ES-4	Adhere to Community Center Use Policy.	All	High	Wendell Parks and Recreation	Internal	Completed	This policy has been implemented. This action will be removed in the next update as a capability.
ES-5	Review Inclement Weather Policy.	All	High	Wendell All Departments	Internal	2018	The Inclement Weather Policy is in place and will continue to be utilized. However, the policy will need to be reviewed and updated.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
ES-6	Adhere to Snow and Debris Removal Policy.	Hurricanes, Tornadoes, Winter Storms/ Freezes	High	Wendell Administration and Public Works	Internal	Completed	This policy has been implemented. This action will be removed in the next update as a capability.
ES-7	Adhere to debris removal and disposal plan.	Hurricanes, Tornadoes, Severe Winter Storms	Moderate	Wendell Administration and Public Works	Internal and Possible Grant	Completed	This policy has been implemented. This action will be removed in the next update as a capability.
Public Education and Awareness							
PEA-1	Provide links to hazard notices on Town website.	All	Moderate	Wendell Town Web Administrator	Internal	Completed	Hazard notices are posted on the town website when events occur. This will continue going forward.
PEA-2	Inform public of construction requirements in hazard areas.	Flood	Moderate	Wendell Building, Inspections	Internal	2015	Materials have been developed to inform the public of construction requirements in hazard areas, but this material requires updating.
PEA-3	Require disclosure of flood hazard in real estate transactions.	Flood	Moderate	Wendell Planning	Internal	Deleted	Delete – not feasible to be involved in real estate transactions
PEA-4	Make FEMA manuals available to residents.	All	Moderate	Wendell Planning	Internal	2015, annual review and update	FEMA manuals have been made available to residents in the past, but new materials are consistently being developed so the town will need to review and update materials annually.
PEA-5	Present Plan at public meeting.	All	Moderate	Wendell Planning	Internal	Completed	Complete New Target Date September 2014. This action will be removed in the next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-6	Post plan maintenance report for public comment.	All	Moderate	Wendell Town Manager	Internal	Completed	Plan maintenance report was posted for viewing by the public. This action will be removed in the next update.
PEA-7	Post copy of approved Plan in Town Hall.	All	Moderate	Wendell Planning	Internal	Completed	A copy of the plan was posted at Town Hall. This will be done with the new plan update as well. This action will be removed in the next update.
PEA-8	Provide links to flood warnings, hurricane tracks, tornado and severe thunderstorm warnings, winter storm warnings, and drought/heat wave information on website.	Flood, Hurricane and Tropical Storms, Tornadoes, Severe Thunderstorm, Drought, Heat Wave	Low	Wendell Town Web Administrator	Internal	2018	Links are provided on the website for these items but will need to be updated.
PEA-9	Make flood maps available to the public.	Flood	Moderate	Wendell Planning	Internal	Completed	Flood maps are available to the public via a number of channels. This action will be removed in the next update.
PEA-10	Post water restrictions and tips for reducing water consumption on website, within Town Hall, and on local access television station.	Drought/Heat Wave	Moderate	Wendell Public Works	Internal	Completed	Tips on water restrictions and for reducing consumption have been displayed online. This action will be removed in the next update.
PEA-11	Keep website updated with latest storm and emergency response information.	All	Low	Wendell Web Administrator	Internal	Completed	The town has website updated and available to keep public informed in case of emergencies

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-12	Inform public about flood mitigation techniques (i.e., remove debris from storm drains prior to large storm event).	Flood, Hurricane and Tropical Storms, Severe Thunderstorm	Moderate	Wendell Public Works	Internal	2017	New action

Town of Zebulon Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
Prevention							
P-1	Prepare Hazard Mitigation Plan Update.	All	High	Zebulon Advisory Committee	Town of Zebulon	2014, Every 5 years	The Hazard Mitigation Plan will be completed by Fall 2014. This action will be removed in the next update.
P-2	Adopt Hazard Mitigation Plan Update.	All	High	Zebulon Board of Commissioners	Town of Zebulon	Upon approval of HMP by FEMA	The Hazard Mitigation Plan will be completed by Fall 2014. This action will be removed in the next update.
P-3	Prepare Plan maintenance report.	All	High	Zebulon Planning Department	Town of Zebulon	2015, Annually	Plan maintenance meetings have been held annually and will continue to be held going forward.
P-4	Prepare Updates of Hazard Mitigation Plan.	All	High	Zebulon Planning Department	Town of Zebulon	As needed	Multi-jurisdictional plan update occurring currently. This action will be removed in the next update.
P-5	Revise Hazard Mitigation Plan.	All	High	Zebulon Advisory Committee	Town of Zebulon	Every 5 years	Multi-jurisdictional plan update occurring currently. This action will be removed in the next update.
P-6	Keep evacuation routes open.	All	High	Zebulon Public Works, Public Safety	Town of Zebulon	Completed	Integrated into staff duties. This action will be removed in the next update.
P-7	Maintain trees adjacent to power lines and critical facilities.	All	High	Zebulon Public Works, Progress Energy	Town of Zebulon, Progress Energy	Completed	Integrated into staff duties. This action will be removed in the next update.
P-8	Maintain water supply system.	All	High	Zebulon Public Works	Town of Zebulon	Completed	Integrated into staff duties. This action will be removed in the next update.
P-9	Maintain sewer lift stations, including generators.	All	High	Zebulon Public Works	Town of Zebulon	Completed	Integrated into staff duties. This action will be removed in the next update.
P-10	Install generators as needed at life stations.	All	High	Zebulon Public Works	Town of Zebulon	Deleted	Remove – done by City of Raleigh so this should be removed.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-11	Maintain storm drainage system.	Flooding	High	Zebulon Public Works	Town of Zebulon	Completed	Integrated into staff duties. This action will be removed in the next update.
P-12	Implement disaster notification policy.	All	High	Zebulon Public Safety	Town of Zebulon	Completed	In place. This action will be removed in the next update.
P-13	Implement Community Center Use Policy.	All	High	Zebulon Parks & Recreation	Town of Zebulon	Deleted	Does not meet State and Federal qualifications
P-14	Update inclement weather policy.	All	High	All Town Departments	Town of Zebulon	Completed	Personnel Policy Update has been implemented.
P-15	Enforce subdivision standards for development in flood hazard areas.	Flood	High	Zebulon Planning & Inspections	Town of Zebulon, Wake County	2015	Development of and inclusion within UDO to take place in the future.
P-16	Further restrict development in floodplain by prohibiting development or requiring 2 feet of freeboard.	Flood	High	Zebulon Planning	Town of Zebulon	2015	Development of and inclusion within UDO to take place in the future.
P-17	Revise floodplain ordinance.	Flood	High	Zebulon Planning	Town of Zebulon	2015	Development of and inclusion within UDO to take place in the future.
P-18	Require burial of power lines for new developments.	Hurricane, Tornadoes, Winter Storms/ Freezes	Moderate	Zebulon Planning	Town of Zebulon	2015	Development of and inclusion within UDO to take place in the future.
P-19	Require new construction to comply with wind section of Building Code.	Hurricane, Tornadoes, Severe Thunderstorms	High	Zebulon Inspections	Wake County	Completed	Integrated into staff duties. This action will be removed in the next update.
P-20	Implement snow, ash, and debris removal policies.	Hurricane Tornadoes, Winter Storms/ Freezes, Wildfires	High	Zebulon Administration, Public Works	Town of Zebulon	Completed	Integrated into staff duties. This action will be removed in the next update.
P-21	Prepare and implement debris removal and disposal plan.	Hurricane Tornadoes, Winter Storms/ Freezes, Wildfires	Moderate	Zebulon Administration, Public Works	Town of Zebulon	2014	Upon approval by FEMA and Board of Commissioners
P-22	Require new construction to comply with snow load requirements of Building Code.	Winter Storms/ Freezes	High	Zebulon Inspections	Wake County	Completed	Integrated into staff duties. This action will be removed in the next update.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
P-23	Include flood map data on GIS system.	Flood	Moderate	Zebulon Planning	Town of Zebulon	Six Months after receipt of revised FIRM maps	These will be included in GIS systems Six Months after receipt of revised FIRM maps
P-24	Tie law enforcement to Statewide 800 megahertz system.	All	Moderate	Zebulon Public Safety	Town of Zebulon	2018	Although some work has been done to integrate this system, this is anticipated to be fully integrated by 2018
Natural Resource Protection							
NRP-1	Maintain and expand greenway system, stream buffers.	Flood	Low	Zebulon Park & Recreation	Town of Zebulon	Completed	Integrated into staff duties. This action will be removed in the next update.
Public Education and Awareness							
PEA-1	Provide links to hazard notices on Town website.	All	Moderate	Zebulon Town Web Administrator	Town of Zebulon	This will occur directly prior to or during a hazard event	The town has been able to update the town website with hazard notices prior to events and will continue to do so going forward.
PEA-2	Inform public of construction requirements in hazard areas.	Flood	Moderate	Zebulon Building Inspectors	Wake County	Completed	Integrated into staff duties. This action will be removed in the next update.
PEA-3	Require disclosure of flood hazard in real estate transactions.	Flood	Moderate	Zebulon Planning Department	Town of Zebulon	2015	Development of and inclusion within UDO to take place in the future.
PEA-4	Public outreach projects.	All	Moderate	Zebulon Administration	Town of Zebulon	2018	The town will work to develop public outreach projects that help citizens become better prepared to deal with disasters.
PEA-5	Make FEMA manuals available to residents.	All	Moderate	Zebulon Planning Department	Town of Zebulon	Completed	Integrated into staff duties. This action will be removed in the next update.
PEA-6	Present Plan at public meeting.	All	Moderate	Zebulon Planning	Town of Zebulon	Upon approval of HMP by FEMA	Upon approval of HMP by FEMA This action will be removed in the next update.
PEA-7	Post Plan maintenance report for public comment.	All	Moderate	Zebulon Town Manager	Town of Zebulon	Upon approval of HMP by FEMA	Upon approval of HMP by FEMA This action will be removed in the next update.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Lead Agency/ Department	Potential Funding Sources	Implementation Schedule	Implementation Status (2014)
PEA-8	Post copy of approval Plan in Town Hall.	All	Moderate	Zebulon Planning	Town of Zebulon	Upon approval of HMP by FEMA	Upon approval of HMP by FEMA This action will be removed in the next update.
PEA-9	Provide links to flood warnings, hurricane tracking information, tornado and severe thunderstorm warnings, winter storm warnings, wildfire warnings, and any other available hazard warning information on website.	All	Low	Zebulon Town Web Administrator	Town of Zebulon	2018	The town will work on reaching out to the public utilizing different communication channels and will review and update its outreach program
PEA-10	Make flood maps available to public.	Flood	Moderate	Zebulon Planning	Town of Zebulon	Completed	Integrated into staff duties This action will be removed in the next update.
PEA-11	Keep website updates with latest storm and emergency response information.	All	Low	Zebulon Town Web Administrator	Town of Zebulon	Completed	The town has been able to update the town website with hazard notices prior to events and will continue to do so going forward.