

2 Planning Process

Requirement §201.6(b): An open public involvement process is essential to the development of an effective plan. To develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

- 1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- 2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and nonprofit interests to be involved in the planning process; and
- 3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Requirement §201.6(c)(1): The plan shall include the following:

- 1) Documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

This section provides a review of the planning process followed for the development of the Wake County Multi-Jurisdictional Hazard Mitigation Plan. It consists of the following sub-sections:

- ▶ 2.1 Purpose and Vision
- ▶ 2.2 What’s Changed in the Plan
- ▶ 2.3 Preparing the Plan
- ▶ 2.4 Hazard Mitigation Planning Committee
- ▶ 2.5 Meetings and Workshops
- ▶ 2.6 Involving the Public
- ▶ 2.7 Outreach Efforts
- ▶ 2.8 Involving the Stakeholders
- ▶ 2.9 Documentation of Plan Progress

2.1 PURPOSE AND VISION

As defined by FEMA, “hazard mitigation” means any sustained action taken to reduce or eliminate the long-term risk to life and property from a hazard event. Hazard mitigation planning is the process through which hazards are identified, likely impacts determined, mitigation goals set, and appropriate mitigation strategies determined, prioritized, and implemented.

The purpose of the Wake County Multi-Jurisdictional Hazard Mitigation Plan is to identify, assess, and mitigate hazard risk to better protect the people and property within Wake County from the effects of natural and human-caused hazards. This plan documents progress on existing hazard mitigation planning efforts, updates the previous plan to reflect current conditions in the County including relevant hazards and vulnerabilities, increases public education and awareness about the plan and planning process, maintains grant eligibility for participating jurisdictions, maintains compliance with state and federal requirements for local hazard mitigation plans, and identifies and outlines strategies the County and participating jurisdictions will use to decrease vulnerability and increase resiliency.

The Wake County Hazard Mitigation Planning Committee (HMPC) met in working groups on January 7th and January 9th, 2019; during these meetings, the HMPC discussed their vision for Wake County in terms of hazard mitigation planning. The committee was asked to consider what the successful implementation of the plan would achieve, what outcomes the plan would generate, and what Wake County will look like in five years as a way to brainstorm a vision statement for the plan. The HMPC developed and discussed a list of ideas that were consolidated into the following statement and set of key principles that they agreed should define and guide the planning process and the County’s approach to hazard mitigation.

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Wake County will build upon the success of its past efforts to become more resilient and adaptable to hazards, embrace the need to manage growth with sustainable practices, and make intentional, coordinated decisions that maximize long-term and shared benefits for all.

The following key principles underpin this vision and describe how the HMPC hopes to characterize the future of Wake County. In many cases, the County and its incorporated jurisdictions already operate with these principles in mind.

Resilient & Adaptable: Wake County will be able to quickly react to and recover from hazard events and will use both the development and post-disaster redevelopment processes to reduce existing vulnerabilities and future potential risk, including through identification and planning for vulnerable populations.

Sustainable: From an environmental mindset, Wake County will protect key ecological resources, and from a resource and efficiency perspective, the county will use administrative and financial resources in ways that maximize and share benefits.

Intentional: Wake County will address growth and development decisions by considering long-term outcomes, seeking opportunities for mitigation, minimizing risk and vulnerability, and implementing mitigation projects that can be scaled up or shared with other jurisdictions, if successful.

Coordinated: Wake County will integrate planning efforts across departments and across incorporated jurisdictions to ensure that goals and decisions reinforce each other. Additionally, jurisdictions will work together to address issues on larger scales, such as a watershed or ecosystem level.

2.2 WHAT'S CHANGED IN THE PLAN

This plan is an update to the 2015 Wake County Multi-jurisdictional Hazard Mitigation Plan, which included participation from all jurisdictions involved in this plan update. The previous plan was approved by FEMA on January 28, 2015.

This hazard mitigation plan update involved a comprehensive review and update of each section of the existing plan and an assessment of the success of the County and participating municipalities in evaluating, monitoring and implementing the mitigation strategy outlined in their existing plans. Only the information and data still valid from the existing plans was carried forward as applicable into this update. The following requirements were addressed during the development of this regional plan:

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

Section 4.2 provides a comparison of the hazards addressed in the 2018 State of North Carolina HMP and the existing Wake County plan and provides the final decision made by the HMPC as to which hazards should be included in the updated 2020 Wake County Multi-Jurisdictional Plan.

In addition to the specific changes in hazard analyses identified in Section 4.2, the following items were also addressed in this 2020 plan update:

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- ▶ GIS was used, to the extent data allowed, to analyze the priority hazards as part of the vulnerability assessment.
- ▶ Assets at risk to identified hazards were identified by property type and values of properties based on North Carolina Emergency Management’s IRISK Database.
- ▶ A discussion on climate change and its projected effect on specific hazards was included in each hazard profile in the risk assessment.
- ▶ The discussion on growth and development trends was enhanced utilizing 2017 American Community Survey data.
- ▶ Enhanced public outreach and agency coordination efforts were conducted throughout the plan update process in order to meet the more rigorous requirements of the 2017 CRS Coordinator’s Manual, in addition to DMA requirements.

2.3 PREPARING THE PLAN

The planning process for preparing the Wake County Multi-jurisdictional Hazard Mitigation Plan was based on DMA planning requirements and FEMA’s associated guidance. This guidance is structured around a four-phase process:

- 1) Planning Process;
- 2) Risk Assessment;
- 3) Mitigation Strategy; and
- 4) Plan Maintenance.

Into this process, the planning consultant integrated a more detailed 10-step planning process used for FEMA’s Community Rating System (CRS) and Flood Mitigation Assistance programs. Thus, the modified 10-step process used for this plan meets the requirements of six major programs: FEMA’s Hazard Mitigation Grant Program; Pre-Disaster Mitigation Program; Community Rating System; Flood Mitigation Assistance Program; Severe Repetitive Loss Program; and new flood control projects authorized by the U.S. Army Corps of Engineers.

Table 2.1 shows how the 10-step CRS planning process aligns with the four phases of hazard mitigation planning pursuant to the Disaster Mitigation Act of 2000.

Table 2.1 – Mitigation Planning and CRS 10-Step Process Reference Table

DMA Process	CRS Process
Phase I – Planning Process	
§201.6(c)(1)	Step 1. Organize to Prepare the Plan
§201.6(b)(1)	Step 2. Involve the Public
§201.6(b)(2) & (3)	Step 3. Coordinate
Phase II – Risk Assessment	
§201.6(c)(2)(i)	Step 4. Assess the Hazard
§201.6(c)(2)(ii) & (iii)	Step 5. Assess the Problem
Phase III – Mitigation Strategy	
§201.6(c)(3)(i)	Step 6. Set Goals
§201.6(c)(3)(ii)	Step 7. Review Possible Activities
§201.6(c)(3)(iii)	Step 8. Draft an Action Plan
Phase IV – Plan Maintenance	
§201.6(c)(5)	Step 9. Adopt the Plan
§201.6(c)(4)	Step 10. Implement, Evaluate and Revise the Plan

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In addition to meeting DMA and CRS requirements, this plan also meets the recommended steps for developing a Community Wildfire Protection Plan (CWPP). Table 2.2 below outlines the recommended CWPP process and the CRS step and sections of this plan that meet each step.

Table 2.2 – Community Wildfire Protection Plan Process Reference

CWPP Process	CRS Step	Fulfilling Plan Section
Convene decision makers	Step 1	Section 2 – HMPC
Involve Federal agencies	Step 3	Section 2 – Involving Stakeholders
Engage interested parties (such as community representatives)	Step 1, 2, and 3	Section 2 – HMPC, Involving the Public, Involving Stakeholders
Establish a community base map		Section 4 – Wildfire
Develop a community risk assessment, including fuel hazards, risk of wildfire occurrence, homes, business and essential infrastructure at risk, other community values at risk, local preparedness, and firefighting capability	Step 4 and 5	Section 4 – Wildfire Section 5 – Capability
Establish community hazard reduction priorities and recommendations to reduce structural ignitability	Step 6, 7, and 8	Section 6 – Mitigation Strategy Section 7 – Mitigation Action Plans
Develop an action plan and assessment strategy	Step 8 and 10	Section 7 – Mitigation Action Plans Section 8 – Plan Maintenance
Finalize the CWPP	Step 9	Section 9 – Plan Adoption

The process followed for the preparation of this plan, as outlined in Table 2.1 above, is as follows:

2.3.1 Phase I – Planning Process

Planning Step 1: Organize to Prepare the Plan

With the County’s commitment to participate in the DMA planning process, community officials worked to establish the framework and organization for development of the plan. An initial meeting was held with key community representatives to discuss the organizational aspects of the plan development process. The Wake County Emergency Management Deputy Director led the County’s effort to reorganize and coordinate for the plan update. Consultants from Wood Environment and Infrastructure Solutions, Inc. assisted by leading the County through the planning process and preparing the plan document.

Planning Step 2: Involve the Public

Public involvement in the development of the plan was sought using various methods, as detailed in Section 2.6.

Planning Step 3: Coordinate

The HMPC formed for development of the 2015 Plan was reconvened for this plan update. More details on the HMPC are provided in Section 1.4. Stakeholder coordination was incorporated into the formation of the HMPC and was sought through additional outreach methods. These efforts are detailed in Section 1.8.

Coordination with Other Community Planning Efforts and Hazard Mitigation Activities

In addition to stakeholder involvement, coordination with other community planning efforts was also seen as paramount to the success of this plan. Mitigation planning involves identifying existing policies, tools, and actions that will reduce a community’s risk and vulnerability to hazards. Wake County and its participating jurisdictions use a variety of planning mechanisms, such as Comprehensive Plans, subdivision regulations, building codes, and ordinances to guide growth and development. Integrating existing planning efforts, mitigation policies, and action strategies into this plan establishes a credible and

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comprehensive plan that ties into and supports other community programs. As detailed in Table 2.3, the development of this plan incorporated information from existing plans, studies, reports, and initiatives as well as other relevant data from neighboring communities and other jurisdictions.

These and other documents were reviewed and considered, as appropriate, during the collection of data to support the planning process and plan development, including the hazard identification, vulnerability assessment, and capability assessment. Data from these sources was incorporated into the risk assessment and hazard vulnerability sections of the plan as appropriate. The data was also used in determining the capability of each jurisdiction to implement certain mitigation strategies. The Capability Assessment can be found in Section 5.

Table 2.3 – Summary of Existing Studies and Plans Reviewed

Resource Referenced	Use in this Plan
Local Comprehensive Plans (Wake County Comprehensive Plan, City of Raleigh 2030 Comprehensive Plan, etc.)	The Wake County Plan and City of Raleigh Plan were referenced in the Planning Area Profile in Section 3. Other local comprehensive plans were incorporated into Mitigation Action Plans where applicable in Section 7 and referenced in the Capability Assessment in Section 6.
Local Ordinances (Flood Damage Prevention Ordinances, Subdivision Ordinances, Zoning Ordinances, etc)	Local ordinances were referenced in the Capability Assessment in Section 6 and where applicable for updates or enforcement in Mitigation Action Plans in Section 7.
Triangle Regional Resilience Partnership Resilience Assessment	The Technical Report was used in the preparation of the HIRA and referenced in hazard profiles in Section 4.
Wake County and Incorporated Areas Flood Insurance Study (FIS), Revised 11/17/2017	The FIS was referenced in the preparation of flood hazard profile in Section 4.
Wake County Multi-Jurisdictional Hazard Mitigation Plan, 2015	The previous plan was referenced in compiling the Hazard Identification and Risk Assessment in Section 4 and in reporting on implementation status and developing the Mitigation Action Plans in Section 2 and Section 7, respectively.

2.3.2 Phase II – Risk Assessment

Planning Steps 4 and 5: Identify/Assess the Hazard and Assess the Problem

The HMPC completed a comprehensive effort to identify, document, and profile all hazards that have, or could have, an impact on the planning area. Geographic information systems (GIS) were used to display, analyze, and quantify hazards and vulnerabilities. A draft of the risk and vulnerability assessment was made available on the plan website for the HMPC, stakeholders, and the public to review and comment.

The HMPC also conducted a capability assessment to review and document the planning area’s current capabilities to mitigate risk from and vulnerability to hazards. By collecting information about existing government programs, policies, regulations, ordinances, and emergency plans, the HMPC could assess those activities and measures already in place that contribute to mitigating some of the risks and vulnerabilities identified. A more detailed description of the risk assessment process and the results are included in Section 4 Risk Assessment.

2.3.3 Phase III – Mitigation Strategy

Planning Steps 6 and 7: Set Goals and Review Possible Activities

Wood facilitated brainstorming and discussion sessions with the HMPC that described the purpose and process of developing a vision for the planning process and setting planning goals and objectives, a

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comprehensive range of mitigation alternatives, and a method of selecting and defending recommended mitigation actions using a series of selection criteria. This information is included in Section 6 Mitigation.

Planning Step 8: Draft an Action Plan

A complete first draft of the plan was prepared based on input from the HMPC regarding the draft risk assessment and the goals and activities identified in Planning Steps 6 and 7. This draft was shared for HMPC, stakeholder, and public review and comment via the plan website. HMPC, public, and stakeholder comments were integrated into the final draft for the North Carolina Division of Emergency Management (NCEM) and FEMA Region IV to review and approve, contingent upon final adoption by the County and its participating jurisdictions.

2.3.4 Phase IV – Plan Maintenance

Planning Step 9: Adopt the Plan

To secure buy-in and officially implement the plan, the plan will be reviewed and adopted by all participating jurisdictions. Resolutions will be provided in Section 9.

Planning Step 10: Implement, Evaluate and Revise the Plan

Implementation and maintenance of the plan is critical to the overall success of hazard mitigation planning. Up to this point in the planning process, the HMPC's efforts have been directed at researching data, coordinating input from participating entities, and developing appropriate mitigation actions. Section 8 Plan Maintenance provides an overview of the overall strategy for plan implementation and maintenance and outlines the method and schedule for monitoring, updating, and evaluating the plan. The Section also discusses incorporating the plan into existing planning mechanisms and how to address continued public involvement.

2.4 HAZARD MITIGATION PLANNING COMMITTEE

As with the previous plan, this Hazard Mitigation Plan was developed under the guidance of a Hazard Mitigation Planning Committee (HMPC). The Committee's representatives included representatives of Town departments, federal and state agencies, citizens and other stakeholders.

To reconvene the planning committee, a letter was sent via email to all County, City, and Town Hazard Mitigation Planning Committee (HMPC) contacts from the previous planning effort. Each community was asked to designate a primary and secondary contact for the HMPC. Communities were also asked to identify local stakeholder representatives to participate on the HMPC alongside the County, City, and Town officials in order to improve the integration of stakeholder input into the plan.

For the sake of simplifying the planning process and facilitating easier coordination across all the participating jurisdictions, the HMPC was split into two regional working groups. The East Wake Working Group included Knightdale, Rolesville, Wake Forest, Wendell, and Zebulon. The West Wake Working Group included Apex, Cary, Fuquay-Varina, Garner, Holly Springs, and Morrisville. Representatives from Wake County, Raleigh, and RDU were included in both working groups. Table 2.4 details the HMPC members and the agencies and jurisdictions they represented.

The formal HMPC meetings followed the 10 CRS Planning Steps. Agendas, minutes, and sign-in sheets for the HMPC meetings are included in Appendix B. The meeting dates and topics discussed are summarized in Section 2.5 Meetings and Workshops. All HMPC meetings were open to the public.

The DMA planning regulations and guidance stress that to satisfy multi-jurisdictional participation requirements, each local government seeking FEMA approval of their mitigation plan must participate in the planning effort in the following ways:

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- Participate in the process as part of the HMPC;
- Detail where within the planning area the risk differs from that facing the entire area;
- Identify potential mitigation actions; and
- Formally adopt the plan.

For the Wake County HMPC, “participation” meant the following:

- ▶ Providing facilities for meetings;
- ▶ Attending and participating in the HMPC meetings;
- ▶ Collecting and providing requested data (as available);
- ▶ Completing the Local Capability Self-Assessment;
- ▶ Providing an update on previously adopted mitigation actions;
- ▶ Managing administrative details;
- ▶ Making decisions on plan process and content;
- ▶ Identifying mitigation actions for the plan;
- ▶ Reviewing and providing comments on plan drafts;
- ▶ Informing the public, local officials, and other interested parties about the planning process and providing opportunity for them to comment on the plan;
- ▶ Coordinating and participating in the public input process; and
- ▶ Coordinating the formal adoption of the plan by local governing bodies.

Detailed summaries of HMPC meetings are provided under Meetings and Workshops, including meeting dates, locations, and topics discussed. During the planning process, the HMPC members communicated through face-to-face meetings, email, and telephone conversations. This continued communication ensured that coordination was ongoing throughout the entire planning process despite the fact that not all HMPC members could be present at every meeting. Additionally, draft documents were distributed via the plan website so that the HMPC members could easily access and review them and provide comments.

Table 2.4 – HMPC Members

Jurisdiction	Agency	Representative	Position or Title
City of Raleigh	Emergency Management and Special Events	Kelly Lindsey*	Emergency Management Coordinator
City of Raleigh	Emergency Management and Special Events	Whitney Schoenfeld	Special Events Planner
City of Raleigh	Engineering Services – Stormwater Management	Ben Brown	Stormwater Administrator
City of Raleigh	Office of Sustainability	Megan Anderson	Sustainability Manager
City of Raleigh	Office of Sustainability	Nicole Goddard	Sustainability Analyst
Town of Apex	Planning Department	Shelly Mayo	Planner
Town of Apex	Planning Department	Dianne Khin	Planning Director
Town of Apex	N/A	Jim Scarborough	Citizen Stakeholder
Town of Cary	Town Manager’s Office	Emily Barrett	Sustainability Manager
Town of Cary	Water Resources Department	Eric Kulz	Environmental Specialist
Town of Cary	N/A	Tom Hegele	Citizen Stakeholder
Town of Fuquay-Varina	Planning Department	Samantha Smith	Planning Director
Town of Fuquay-Varina	Planning Department	Allyssa Stafford	Planner
Town of Fuquay-Varina	N/A	Ed Ridpath	Citizen Stakeholder
Town of Garner	Planning Department	David Bamford	Planning Services Manager
Town of Garner	Planning Department	Jeff Triezenberg	Planning Director

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Jurisdiction	Agency	Representative	Position or Title
Town of Holly Springs	Town of Holly Springs	Kimberly Keyes	Project and Construction Manager
Town of Holly Springs	Engineering Department	Daniel Colavito	Environmental Specialist
Town of Holly Springs	N/A	John Sutherland	Citizen Stakeholder
Town of Knightdale	Development Services Department	Jason Brown	Senior Planner – Long Range
Town of Knightdale	Development Services Department	Chris Hills	Development Services Director
Town of Knightdale	N/A	Ben McDonald	Citizen Stakeholder
Town of Morrisville	Planning Department	Brad West	Planner
Town of Morrisville	Planning Department	Dylan Bruchhaus	Planner
Town of Morrisville	N/A	Steve Botha	Citizen Stakeholder
Town of Rolesville	Planning Department	Danny Johnson	Planning Director
Town of Rolesville	Town of Rolesville	Kelly Arnold	Town Manager
Town of Wake Forest	Town of Wake Forest	Patrick Reidy	Senior Planner – Development Services
Town of Wake Forest	N/A	Grif Bond	Citizen Stakeholder
Town of Wendell	Planning Department	David Bergmark	Planning Director
Town of Wendell	Planning Department	Mackenzie Day	Planner
Town of Wendell	N/A	Jon Olson	Citizen Stakeholder
Town of Zebulon	Public Works Department	Chris Ray	Public Works Director
Town of Zebulon	Town of Zebulon	Joe Moore	Town Manager
Town of Zebulon	Planning Department	Teresa Piner	Interim Planning Director
Town of Zebulon	Planning Department	Meade Bradshaw	Assistant Planning Director
Wake County	Wake County Planning	Sharon Peterson	Long Range Planner
Wake County	Wake County Planning	Bryan Coates	Long Range Planner
Wake County	Wake Soil and Water Conservation District	Teresa Furr	Natural Resource Conservationist
Wake County	N/A	Emma D'Allaird	Citizen Stakeholder
Wake County	RDU	Jason Alvero	Director of Emergency Operations

*Note: Vacated position midway through the planning process. Replaced by Whitney Schoenfeld.

2.5 MEETINGS AND WORKSHOPS

The preparation of this Plan required a series of meetings and workshops for facilitating discussion, gaining consensus, and initiating data collection efforts with local government staff, community officials, and other identified stakeholders. More importantly, the meetings and workshops prompted continuous input and feedback from relevant participants throughout the drafting stages of the Plan.

Table 2.5 summarizes the key meetings and workshops held by the HMPC during the development of the plan. In many cases, routine discussions and additional meetings were held by local staff to accomplish planning tasks specific to their department or agency. For example, completing the Local Capability Self-Assessment or seeking approval of specific mitigation actions for their department or agency to undertake and include in their Mitigation Action Plan. These meetings were informal and are not documented here.

Public meetings are summarized in subsection 2.6.

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Table 2.5 – Summary of HMPC Meetings

Meeting Title	Meeting Topic	Meeting Date	Meeting Location
HMPC Mtg. #1 – Project Kick-Off	<ol style="list-style-type: none"> 1) Introduction to DMA, CRS, and FMA requirements and the planning process 2) Review of HMPC responsibilities and the project schedule. 	November 14, 2018	Wake County Commons Bldg. 4011 Carya Drive, Raleigh
HMPC Mtg. #2 – East Working Group	<ol style="list-style-type: none"> 1) Review and update plan goals 2) Brainstorm a vision statement 3) Report on status of actions from the 2015 plan 	January 07, 2019	Wake County Eastern Regional Center 1002 Dogwood Drive, Room 157, Zebulon
HMPC Mtg. #2 – West Working Group	<ol style="list-style-type: none"> 4) Complete the capability self-assessment 	January 09, 2019	Page Walker Arts & History Center, 3rd fl., 119 Ambassador Loop, Cary
HMPC Mtg. #3 – East Working Group	<ol style="list-style-type: none"> 1) Review Draft Hazard Identification & Risk Assessment (HIRA) 	March 04, 2019	Knightdale Fire Dept. Training Rm 979 Steeple Square Ct, Knightdale, NC 27545
HMPC Mtg. #3 – West Working Group	<ol style="list-style-type: none"> 2) Draft objectives and Mitigation Action Plans 	March 08, 2019	Holly Springs Cultural Center, 300 West Ballentine Street, Holly Springs, NC 27540
HMPC Mtg. #4	<ol style="list-style-type: none"> 1) Review the Draft Hazard Mitigation Plan 2) Solicit comments and feedback 	April 22, 2019	Wake County Commons Bldg. 4011 Carya Drive, Raleigh

2.6 INVOLVING THE PUBLIC

An important component of any mitigation planning process is public participation. Individual citizen and community-based input provides the entire planning team with a greater understanding of local concerns and increases the likelihood of successfully implementing mitigation actions by developing community “buy-in” from those directly affected by the decisions of public officials. As citizens become more involved in decisions that affect their safety, they are more likely to gain a greater appreciation of the hazards present in their community and take the steps necessary to reduce their impact. Public awareness is a key component of any community’s overall mitigation strategy aimed at making a home, neighborhood, school, business, or entire planning area safer from the potential effects of hazards.

Public involvement in the development of the plan was sought using various methods including open public meetings, an interactive plan website, a public participation survey, and by making copies of draft plan documents available for public review online and at government offices. Additionally, all HMPC meetings were made open to the public.

All public meetings were advertised on the plan website, which was shared on local community websites, and on local community websites, where possible. Copies of meeting announcements are provided in Appendix B. The public meetings held during the planning process are summarized in Table 2.6.

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Table 2.6 – Summary of Public Meetings

Meeting Title	Meeting Topic	Meeting Date	Meeting Location
Public Meeting #1	<ol style="list-style-type: none"> 1) Introduction to DMA, CRS, and FMA requirements and the planning process 2) Review of HMPC responsibilities and the project schedule. 	November 14, 2018	Wake County Commons Bldg. 4011 Cary Drive, Raleigh
Public Meeting #2	<ol style="list-style-type: none"> 1) Review “Draft” Hazard Mitigation Plan 2) Solicit comments and feedback 	April 22, 2019	Wake County Commons Bldg. 4011 Cary Drive, Raleigh

2.7 OUTREACH EFFORTS

The HMPC agreed to employ a variety of public outreach methods including established public information mechanisms and resources within the community. The table below details public outreach efforts employed during the preparation of this plan.

Table 2.7 – Public Outreach Efforts

Location	Date	Event/Message
Plan website	Ongoing	Meeting announcements, meeting materials, and description of hazards; contact information provided to request additional information and/or provide comments
Local community websites	11/13/2018	Public Meeting #1 announcements posted
Local community websites	Ongoing	Link to the plan website shared to expand reach
Public survey	Ongoing	Survey hosted online and made available via shareable link
Plan website - HIRA draft	3/4/2019	Draft HIRA made available for review and comment online
Plan website - Draft Plan	4/26/2019	Full draft plan made available for review and comment online

Public involvement activities for this plan update included press releases, creation of a website for the plan, a public survey, and the collection of public and stakeholder comments on the draft plan.

A public outreach survey was made available on November 14, 2018 and remained open for response until February 22, 2019. The public survey requested public input into the Hazard Mitigation Plan planning process and the identification of mitigation activities to lessen the risk and impact of future hazard events. The survey is shown in Appendix B. The survey was available in hard copy at the first public meeting and online on the plan website. In total, 110 survey responses were received, with 66 responses received via direct response on the website and 44 received via the shared web link.

The following is a list of high-level summary results and analysis derived from survey responses:

- ▶ 12.7% of respondents say they feel not at all prepared for a hazard event; 69.1% feel somewhat prepared.
- ▶ 65.1% of respondents do not know where evacuation centers or storm shelters are located; however, 96.3% of respondents say they are able to evacuate or take shelter if necessary, which indicates that most people manage evacuating or taking shelter through their own resources. It is possible that these results skew toward those with more awareness of hazard risk and resources to respond.
- ▶ Over 40% of respondents do not know where to get more information on hazard risk and preparedness.

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- ▶ Hurricane was rated the most significant hazard, followed by tornado, severe winter storm, and severe weather. Landslide was rated the least significant hazard, followed by dam failure and earthquake.
- ▶ Many respondents who reported having taken steps to mitigate risk at home reported preparedness actions such as emergency kits and supplies and evacuation plans. Few respondents noted prevention or property protection actions; therefore, these may be important ideas to promote in outreach.
- ▶ Respondents largely favored emergency services projects and structural projects for mitigation.

Detailed survey results are provided in Appendix B.

2.8 INVOLVING THE STAKEHOLDERS

In addition to representatives of each participating jurisdiction, the Hazard Mitigation Planning Committee included a variety of stakeholders. Stakeholders on the HMPC included representatives from Cary CERT and Wake County EMS. Representatives from North Carolina Emergency Management also attended HMPC meetings. Input from additional stakeholders, including neighboring communities, was solicited through invitations to the open public meetings and distribution of the public survey. However, if any additional stakeholders representing other agencies and organizations participated through the public survey, that information is unknown due to the anonymous nature of the survey.

2.9 DOCUMENTATION OF PLAN PROGRESS

Progress on the mitigation strategy developed in the previous plan is documented in this plan update. Table 2.8 below details the status of mitigation actions from the previous plan. More detail on actions being carried forward is provided in Section 7: Mitigation Action Plans.

Table 2.8 – Status of Previous Mitigation Actions

Jurisdiction	Completed	Deleted	Carried Forward
Wake County	2	0	3
City of Raleigh	0	0	12
Town of Apex	4	6	12
Town of Cary	3	4	4
Town of Fuquay-Varina	13	1	25
Town of Garner	5	6	13
Town of Holly Springs	8	1	21
Town of Knightdale	3	7	9
Town of Morrisville	6	0	3
Town of Rolesville	1	1	3
Town of Wake Forest	2	0	9
Town of Wendell	7	0	1
Town of Zebulon	6	0	6
Total	60	26	121

Table 2.9 on the following pages details all completed and deleted actions from the 2015 plan.

Community capability continues to improve with the implementation of new plans, policies, and programs that help to promote hazard mitigation at the local level. The current state of local capabilities for the participating jurisdictions is captured in Section 5: Capability Assessment. The participating jurisdictions continue to demonstrate their commitment to hazard mitigation and have proven this by reconvening the

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HMPC to update this multi-jurisdictional plan and by continuing to involve the public in the hazard mitigation planning process.

Moving forward, information in this plan will be used to help guide and coordinate mitigation activities and decisions for local plans and policies in the future. Proactive mitigation planning will help reduce the cost of disaster response and recovery to communities and their residents by protecting critical community facilities, reducing liability exposure, and minimizing overall community impacts and disruptions. This plan identifies activities that can be undertaken by both the public and the private sectors to reduce safety hazards, health hazards, and property damage.

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Table 2.9 – Completed and Deleted Actions from the 2015 Wake County Hazard Mitigation Plan

2015 Action #	Description	2019 Status	Status Comments/Explanation
Wake County			
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.	Completed	
PEA-5	Maintain Environmental Network Call Center. Citizens may report flooding problems, pollution issues, erosion problems, infrastructure damage, littering, etc.	Completed	
Raleigh			
n/a	n/a	n/a	n/a
Apex			
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.	Delete	Updated neighborhood mtg report standards to increase neighbor input on projects before they're approved.
P-35	Encourage the use of porous pavement, vegetative buffers, and islands in large parking areas.	Delete	Considered part of p-34
P-36	Encourage the use of permeable driveways and surfaces to reduce runoff and promote groundwater recharge.	Delete	Considered part of p-34
P-39	Obtain local data including tax parcels, critical facility locations, and other information for use in risk analysis.	Delete	continually being updated - moved to PP-2 & reworded
NRP-10	Adopt erosion and sedimentation control regulations for construction.	Completed	
NRP-11	Use stream restoration to ensure adequate drainage and diversion of stormwater.	Delete	doesn't seem to address the hazard
ES-13	Construct Fire Stations #5 and #6.	Completed	Construction of Fire Station #5 completed. Fire Station #6 targeted under a new action.
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.	Completed	
PEA-4	Public Library – Maintain and update hazard information accessible to the public.	Delete	
PEA-8	Include FEMA flood map link on the Town Website on the Engineering page.	Completed	technically under the Planning page....
Cary			
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.	Delete	Cary's comprehensive plan, called alternately the Cary Community Plan and the Imagine Cary Plan was finalized on January 24, 2017. Implementation in-process.

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2015 Action #	Description	2019 Status	Status Comments/Explanation
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.	Delete	Comprehensive Plan was completed and implementation is In-Progress. Adaptive stormwater approach to openspace and green stormwater infrastructure opportunities.
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.	Delete	Town has spent the last year on a new Adaptive Stormwater approach which includes a review and revisions to stormwater ordinances, a pilot dynamic floodplain model in the Walnut Creek Basin that will be expanded to include partners such as the City of Raleigh as well as modeling of other basins, a proactive approach to maintenance of the Town stormwater infrastructure, using GIS for Condition Assessment and most importantly understanding that our most effective tool for floodplain management is Open Space and exploring ways to continue the development of that very important tool.
SP-2	Replace culverts on Willow Street.	Completed	
SP-3	Replace culverts on Woodland Drive.	Completed	
SP-5	Replace culverts on Kilarney Drive	Completed	
SP-6	Replace culverts on Yubinaranda Circle	Delete	Suspended
Fuquay-Varina			
P-1	Update the Land Use Plan (LUP) update including identification of environmentally sensitive areas for evaluation and protection during development review process.	Completed	New LUP adopted in 2017. Regular updates made to LUP based on zoning map changes and functionality requirements
P-3	Update the Community Transportation Plan including evaluation of stream-crossings to reduce impacts on streams, flood plains and wetlands.	Completed	New CTP adopted 2017
P-4	Update land Development Ordinance (LDO) to incentivize and encourage floodplains, wetlands, riparian buffers to be maintained as open space.	Completed	New LDO adopted 2016. Regular updates made for clarification and functionality
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.	Completed	Landscaping and stormwater standards were updated as part of new LDO 2016
P-6	Develop Stormwater Management Plan based on NPDES Phase II Stormwater Requirements.	Completed	
P-8	Enforce Wake County Flood Hazard Soils Policy, following and utilizing flood study standards.	Completed	Adopted our own in 2016 w/ LDO update
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.	Completed	

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2015 Action #	Description	2019 Status	Status Comments/Explanation
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.	Completed	Adopted standards for max environmental features on lots outside of development standards
P-12	Map storm water drainage system as part of Phase II Stormwater Management Plan.	Completed	regular updates
P-13	Provide for public dissemination building inspections brochures regarding high winds, water damage prevention, and tie downs for accessory structures.	Completed	Same action as 2014
NRP-5	Incorporate regulations for illicit discharge control in Phase II Stormwater Management Plan.	Completed	We now have an illicit discharge ordinance
ES-2	Examine need to evaluate weather radio distribution program (daycares/nursing homes) initiated by Wake County Emergency Management 1999	Delete	County abandoned program
ES-4	Update and implement a Basic Emergency Operations Plan and a Disaster Operations Plan for the Town.	Completed	Regularly updated
ES-11	Examine the feasibility and need to contract/purchase a reverse 911 system to alert citizens of impending danger.	Completed	Reverse 911 program in place
Garner			
P-6	Partner with Wake County and other interested parties to jointly identify and acquire open space lands.	Delete	
P-12	Provide backup power for all critical public facilities (Police, Public Works, and other critical public buildings).	Completed	Completed in 2017
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.	Delete	we do not have enough properties to have an action item
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.	Delete	
PP-6	When feasible, Town of Garner will alleviate flooding into habitable space due to storm water, as consistent with Town Drainage Policy.	Completed	
NRP-4	Continue to work with the U.S. Army Corps of Engineers on wetland protection.	Delete	
NRP-5	Use Open Space Ordinance to protect wildlife habitat.	Delete	Our open space ordinance is geared towards protecting water quality
SP-2	Incorporate on-site retention/detention requirements for Phase II Stormwater Management Plan.	Completed	

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2015 Action #	Description	2019 Status	Status Comments/Explanation
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.	Completed	Completed in 2015
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.	Delete	We partner with Wake County to use theirs.
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.	Completed	
Holly Springs			
P-12	Unified Development Ordinance (UDO) - 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.	Completed	Updated in 2018
P-14	Stormwater Management - 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.	Completed	
ES-8	Urban Search and Rescue – 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.	Completed	We now have enhanced capabilities with the purchase of a drone. The is funded through the State with a mutual aid agreement.
ES-9	Warning Systems - The Town currently uses Wake County’s warning systems. The Town is looking into options for warning systems for the Town of Holly Springs.	Completed	The town currently utilizes Wake County’s warning systems in conjunction with mobile applications that are subscription based for citizens and employees alike. In addition, the town has public access channels and access via media outlets through the PIO to disseminate information concerning emergency warnings and other incidents.
ES-10	Warning Barricades - The Town uses visual warning barricades for vehicular and pedestrian traffic to block properties, roadways, etc. for the safety of the general public.	Completed	The town has a collection of cones, traffic barriers, and other mechanisms to block off, re-route, or set detours for vehicular and pedestrian traffic. In the event that these resources are depleted, WCEM will loan resources to the town for the duration of an incident under the current structures of the MOU.

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2015 Action #	Description	2019 Status	Status Comments/Explanation
ES-11	Trailer Transportation - Deploy step van and tandem axel trailers for transportation of emergency barricades and other equipment on a large scale.	Completed	The police department and the public works department have access to trailers and trucks to deploy resources as needed throughout town.
ES-16	Emergency Response Plans for the Police Station – Develop plans that address immediate action to be undertaken for all personnel assigned to the district in the event of any large scale emergency. A critique will be completed after each critical incident to document need for improvements.	Completed	Completed and constantly reevaluated. We currently have plans of action in place at the Law Enforcement Center that are implemented in the case of large scale emergency situations and disaster responses. Command and control protocols are in place that outline the framework of our responses to planned and unplanned events which detail which command implements will be mobilized within the Emergency Operations Center. All of our command and supervisory staff undergo FEMA NIMS and ICS training, and our planned actions follow in accordance with the best practices recommended by the Department of Homeland Security. In addition, any of our personnel wishing to promote into supervisory positions are tested through table top scenario exercises intended to ensure their knowledge and capabilities in managing a large-scale event. Partnerships have been established through mutual aid agreements, memorandums of understanding, and other such agreements with the various public sector and private sector stakeholders that would be involved in the mitigation, response to, and recovery from large-scale emergencies and other disasters.
ES-19	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.	Delete	Not Completed, but attainable through mutual aid with WCEM. The police department does not have a specifically dedicated mobile command center. However, in circumstances where one would be required, our mutual aid agreement with Wake County Emergency Management authorizes that one be requested for loan and brought to the scene of an incident command situation. In most cases, the initial command field response to a large scale situation would be managed from a command post location operated out of a commander’s vehicle. Prolonged incidents may see that command operations remain at the original command post that was established in the field or those operations could be moved back to the Law Enforcement Center’s Emergency Operations Center as circumstances dictate.

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2015 Action #	Description	2019 Status	Status Comments/Explanation
ES-21	Emergency Response Plans - Emergency response plans are all designed for officers to be assigned for security purposes until owners can take over the responsibility of securing premises.	Completed	Completed and constantly reevaluated. Under our current general orders manual and other established directives, Holly Springs Police Officers would set priority in the event of emergency responses to that of preserving life and mitigating hazards to safety. Once these hazards have been stabilized or mitigated, attention would shift to protecting real and personal properties. Areas of response in order of highest importance to lowest importance have been delineated according to the risk that would occur in allowing the area to be compromised. Town facilities and other critical infrastructure key to response and recovery efforts would take immediate priority. Major business and banking areas likely to be seen as opportunistic targets for persons attempting to exploit situations of mass power outages or civil unrest would be the next priority. Lastly, residential areas (though patrolled throughout a major event) would receive more focused resources to prevent property crime.
Knightdale			
P-1	Adopt Hazard Mitigation Plan & Updates.	Delete	On-Going Task
P-2	Prepare Plan Maintenance Report.	Delete	On-Going Task
P-3	Prepare updates to Plan.	Delete	On-Going Task
P-4	Revise Hazard Mitigation Plan.	Delete	Standard item that must be completed regardless.
P-8	Update Emergency Response Plan.	Completed	The most recent version of the Knightdale EOP was adopted on January 16, 2018.
PEA-1	Distribute "Ready Wake" brochures in libraries, Town Hall, public places and on the Town Web Site.	Delete	On-Going Task
PEA-4	Present Plan at public meeting.	Delete	On-Going Task
PEA-10	Utilize electronic newsletter to keep citizens informed.	Completed	The Town of Knightdale has established an electronic newsletter to distribute information to citizens on a regular basis.
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.	Delete	With new technology available to citizens this project seems unnecessary
PEA-19	Update current approved plant list to add emphasis on drought tolerant species.	Completed	The plant list was updated in 2016 and includes drought tolerant species.
Morrisville			
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.	Completed	
P-2	Evaluate and update the Town of Morrisville Multi-Hazard Emergency Response Plan on an annual basis.	Completed	

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2015 Action #	Description	2019 Status	Status Comments/Explanation
P-4	Maintain all tax parcel information, floodplain locations and frequent flooding areas in Geographic Information Systems (GIS).	Completed	
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.	Completed	
PEA-2	Notify citizens of the public hearing on the Hazard Mitigation Plan annual progress report.	Completed	
PEA-3	Continue providing website link to Federal and State Declared Emergencies affecting the Town.	Completed	
Rolesville			
PEA-3	Develop planned park to include nature trails and environmental education center.	Delete	Nature trail constructed, no plans for the environmental education center.
PEA-4	Town Hall – Maintain and update hazard information accessible to the public.	Completed	Copy of most recent hazard mitigation plan is available for public viewing.
Wake Forest			
P-17	Review and revise the existing response plan and call list, as needed	Completed	
ES-6	Coordinate with suppliers and develop a resource list for fuel and power generation.	Completed	This list has been created and is continuously updated with suppliers
Wendell			
P-17	Include flood map data on GIS system.	Completed	This data is continually updated by Wake County and we download updated information regularly.
NRP-1	Maintain and expand greenway system, stream buffers.	Completed	Clean Water Management Trust Fund Grant awarded. Park expanded to south (Pin 1783383759) with conservation easements in place to protect stream buffers and floodplain.
ES-5	Review Inclement Weather Policy.	Completed	In Q4 2018, the Town Board passed a Street Clearing Policy as a supplemental document to the Inclement Weather Policy. No further amendments are planned at this time.
PEA-2	Inform public of construction requirements in hazard areas.	Completed	Website updated to reflect information on construction requirements, such as flood elevation certificates.
PEA-4	Make FEMA manuals available to residents.	Completed	Link to FEMA site providing the most recent FEMA manuals added to Wendell Website.
PEA-8	Provide links to flood warnings, hurricane tracks, tornado and severe thunderstorm warnings, winter storm warnings, and drought/heat wave information on website.	Completed	During the hurricane, tropical storm and winter weather, the Alert Box on the Town's website was activated with a link to the National Weather Service – Raleigh Office. Social media was updated also. In addition, the Town shared updates from NCDOT, Wake County, the Attorney General's office, City of Raleigh, and Duke Energy during the hurricane. The winter weather included updates from NCDOT, Wake County and Duke Energy. What is posted depends upon the event.

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2015 Action #	Description	2019 Status	Status Comments/Explanation
PEA-12	Inform public about flood mitigation techniques (i.e., remove debris from storm drains prior to large storm event).	Completed	Material has been added to the Public Works webpage to communicate this material to citizens.
Zebulon			
P-21	Prepare and implement debris removal and disposal plan.	Completed	Debris removal plan adopted.
P-23	Include flood map data on GIS system.	Completed	Flood map data is now available on GIS system.
P-24	Tie law enforcement to Statewide 800 megahertz system.	Completed	Public Safety communications has all been moved to Wake County 800 Mhz system.
PEA-1	Provide links to hazard notices on Town website.	Completed	Town provides hazard notices via social media platforms, including preparatory actions.
PEA-4	Public outreach projects.	Completed	Town provides seasonal preparatory actions on social media platforms.
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.	Completed	Town has the ability to alert visitors of the website to provides hazard notices via social media platforms, including preparatory actions.