

## 6 Mitigation Strategy

**Requirement §201.6(c)(3): [The plan shall include] a mitigation strategy that provides the jurisdiction’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.**

This section describes the process for developing the mitigation strategy for the Wake County Multi-Jurisdictional Hazard Mitigation Plan. It describes how the County met the requirements for Planning Step 6 (Set Goals), Planning Step 7 (Review Possible Activities), and Planning Step 8 (Draft an Action Plan). This section includes the following sub-sections:

- ▶ 6.1 Goals and Objectives
- ▶ 6.2 Identification & Analysis of Mitigation Activities

### 6.1 GOALS AND OBJECTIVES

**Requirement §201.6(c)(3)(i): [The mitigation strategy section shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.**

Goal setting builds upon the findings of Section 4, which documents the hazards and associated risks that threaten the Wake County planning area, and Section 5, which evaluates the capacity of the County to reduce the impact of those hazards. The intent of Goal Setting is to identify areas where improvements to existing capabilities can be made so that community vulnerability is reduced. Goals are also necessary to guide the review of possible mitigation measures. This plan needs to make sure that recommended actions are consistent with what is appropriate for the County and its incorporated municipalities. Mitigation goals need to reflect community priorities and should be consistent with other local plans.

- ▶ **Goals** are general guidelines that explain what is to be achieved. They are usually broad-based policy type statements, long term and represent global visions. Goals help define the benefits that the plan is trying to achieve.
- ▶ **Objectives** are short term aims that, when combined, form a strategy or course of action to meet a goal. Unlike goals, objectives are specific and measurable.

#### 6.1.1 Coordination with Other Planning Efforts

The goals of this plan need to be consistent with and complement the goals of other local planning efforts. The primary planning documents that the goals of this plan should complement and be consistent with are the county and participating jurisdictions’ comprehensive plans. Comprehensive plans are important because they are developed and designed to guide future growth within their communities. Keeping the Hazard Mitigation Plan and Comprehensive Plans consistent ensures that land development is done with awareness and understanding of hazard risk and that mitigation projects complement rather than contradict community development objectives.

#### 6.1.2 Goal Setting

At the second planning meetings, held on January 7, 2019 and January 9, 2019, the HMPC reviewed and discussed the goals from the 2015 Plan. The previous goals were as follows:

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| #1 | Protect public health, life, safety, and welfare by increasing public awareness and education of hazards and by encouraging collective and individual responsibility for mitigating hazard risks. |
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#2	Improve technical capability to respond to hazards and to improve the effectiveness of hazard mitigation actions.
#3	Enhance existing or create new policies and ordinances that will help reduce the damaging effects of natural hazards.
#4	Minimize threats to life and property by protecting the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation actions.
#5	Generally reduce the impact of all natural hazards.
#6	Ensure that hazard mitigation is considered when redevelopment occurs after a natural disaster.
#7	Ensure that disaster response and recovery personnel have the necessary equipment and supplies available in order to serve the public in the event of a disaster.

The following changes were proposed to the HMPC:

- ▶ Re-word Goal #2 to emphasize implementing hazard mitigation in addition to hazard response.
- ▶ Delete Goal #3 and incorporate it as an objective under the existing Goal #6.
- ▶ Delete Goal #5.
- ▶ Modify Goal #6 to include new development in addition to post-disaster redevelopment. Emphasize recovery development and the need for resilience.
- ▶ Delete Goal #7 and incorporate it as an objective under the existing Goal #2.

There were three comments on the goal revisions. For Goal #2, the scope of technical capability was questioned and the group decided it should include administrative resources as well as tools, data, and equipment. For Goal #4, it was recommended that adaptation be included in addition to resiliency, to emphasize the need to consider future conditions during the development and redevelopment processes. For Goal #6, it was recommended that the action specifically include recovery because a current capability gap for the County and jurisdictions is the lack of a recovery plan. With the inclusion of these comments, the HMPC approved of the recommended goal revisions.

During the third planning meetings, held on March 4, 2019 and March 8, 2019, the HMPC discussed objectives within each goal in order to better facilitate the development of clearly defined mitigation actions.

The revised goals and the newly identified objectives of this plan update are detailed below in Section 6.1.3.

### 6.1.3 Resulting Goals and Objectives

The HMPC agreed upon four general goals for this planning effort and included specific objectives in support of each goal. The refined goals and objectives are as follows:

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**Goal 1 – Protect public health, life, safety, and welfare by increasing public awareness and education of hazards and by encouraging collective and individual responsibility for mitigating hazard risks.**

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**Objective 1.1:** Develop outreach materials and expand outreach platforms to identify hazard areas and explain risks.

**Objective 1.2:** Seek opportunities to improve warning and notification of hazard events.

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**Goal 2 – Improve technical capability (including administrative resources, tools, data, and equipment) to implement hazard mitigation and respond to hazard events.**

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**Objective 2.1:** Ensure that disaster response and recovery personnel have the necessary equipment and supplies available in order to serve the public in the event of a disaster.

**Objective 2.2:** Seek to fill gaps in local capabilities that will enable improved implementation of mitigation projects.

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**Goal 3 – Minimize threats to life and property by protecting the most vulnerable populations, buildings, and critical facilities through the implementation of cost-effective and technically feasible mitigation actions.**

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**Objective 3.1:** Retrofit, harden, or otherwise protect critical facilities and infrastructure to protect against damages and ensure continuity of operations during hazard events.

**Objective 3.2:** Implement policies and projects that reduce vulnerabilities of key populations and property at risk.

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**Goal 4 – Incorporate resiliency into future growth by ensuring that hazard mitigation is considered for both new development and post-disaster redevelopment and recovery.**

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**Objective 4.1:** Enhance existing or create new policies and ordinances that will help reduce the damaging effects of natural hazards.

**Objective 4.2:** Integrate hazard mitigation into existing and new planning efforts.

### 6.2 IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIVITIES

**Requirement §201.6(c)(3)(ii): [The mitigation strategy section shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.**

To identify and select mitigation projects that support the mitigation goals, each hazard identified in Section 4 Hazard Identification was evaluated. The following were determined based on the Priority Risk Index scores to be high and medium priority hazards:

- ▶ Extreme Heat
- ▶ Severe Weather
- ▶ Severe Winter Storm
- ▶ Hurricane & Tropical Storm
- ▶ Tornado
- ▶ Radiological Emergency
- ▶ Flood
- ▶ Drought
- ▶ Wildfire
- ▶ Hazardous Materials Incident
- ▶ Terrorism
- ▶ Dam Failure

Note: actions were also identified for Landslide despite it being a low priority hazard.

Once it was determined which hazards warranted the development of specific mitigation actions, the HMPC analyzed viable mitigation options that supported the identified goals and objectives. The HMPC was provided with the following list of mitigation categories which are utilized as part of the CRS planning process but are also applicable to multi-hazard mitigation.

- ▶ Prevention
- ▶ Property Protection
- ▶ Natural Resource Protection
- ▶ Emergency Services
- ▶ Structural Projects
- ▶ Public Information and Outreach

The HMPC was also provided with examples of potential mitigation actions for each of the above categories. The HMPC was instructed to consider both future and existing buildings in evaluating possible mitigation actions. Facilitated discussions took place to examine and analyze the options. The HMPC also considered which actions from the previous plan that were not already completed should be continued in this action plan.

#### 6.2.1 Prioritization Process

In the process of identifying continuing and new mitigation actions, the HMPC was provided with a set of prioritization criteria to assist in deciding why one recommended action might be more important, more effective, or more likely to be implemented than another. HMPC members were asked to rate each action on a set of criteria, which were grouped into three categories: Suitability, Risk Reduction, and Cost. The criteria for the prioritization process included the following:

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- ▶ **Suitability**
  - Appropriateness of Action
  - Community Acceptance
  - Technical and Administrative Feasibility
  - Environmental Impact
  - Legal Conformance
  - Consistency with Existing Plans and Other Community Goals
- ▶ **Risk Reduction**
  - Scope of Benefits
  - Potential to Save Lives
  - Importance of Benefits
  - Level of Inconvenience or Unintended Consequence
  - Losses Avoided
  - Number of People to Benefit
- ▶ **Cost**
  - Estimate of Upfront Cost
  - Estimate of Ongoing Cost
  - Benefit to Cost Ratio
  - Financing Availability
  - Affordability
  - Elimination of Repetitive Damages

In accordance with the DMA requirements, an emphasis was placed on the importance of a benefit-cost analysis in determining action priority, as reflected in the prioritization criteria above. For each action, the HMPC considered the benefit-cost analysis in terms of:

- ▶ Ability of the action to address the problem
- ▶ Contribution of the action to save life or property
- ▶ Available technical and administrative resources for implementation
- ▶ Availability of funding and perceived cost-effectiveness

The consideration of these criteria helped to prioritize and refine mitigation actions but did not constitute a full benefit-cost analysis. The cost-effectiveness of any mitigation alternative will be considered in greater detail through performing benefit-cost project analyses when seeking FEMA mitigation grant funding for eligible actions associated with this plan.

Using these prioritization criteria, the HMPC's ratings for each action were input into the North Carolina Emergency Management's Risk Management Tool (RMT), which provided a ranking of High, Medium, or Low priority. The prioritization ranking for each mitigation action considered by the HMPC is provided in Section 7 Mitigation Action Plans.