



# SECTION 1. INTRODUCTION

## 2019 HMP UPDATE CHANGES

- Section 1, Introduction, was updated to reflect the organization of the 2019 Hazard Mitigation Plan (HMP) update.

### 1.1 BACKGROUND

In response to the requirements of the Disaster Mitigation Act of 2000 (DMA 2000), Burlington County, and the cities, townships, and boroughs located therein, have developed this multi-jurisdictional HMP, which is an update of the 2014 *Burlington County New Jersey Multi-Jurisdictional All Hazards Mitigation Plan*. The DMA 2000 amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) and is designed to improve planning for, response to, and recovery from disasters by requiring state and local entities to implement pre-disaster mitigation planning and develop HMPs. The Federal Emergency Management Agency (FEMA) has issued guidelines for HMPs. The New Jersey Office of Emergency Management (NJOEM) supports plan development for jurisdictions in New Jersey.

**Hazard Mitigation** is any sustained action taken to reduce or eliminate the long-term risk and effects that can result from specific hazards.

FEMA defines a **Hazard Mitigation Plan** as the documentation of a state or local government evaluation of natural hazards and the strategies to mitigate such hazards.

Specifically, the DMA 2000 requires that states, with support from local governmental agencies, update HMPs on a five-year basis to prepare for and reduce the potential impacts of natural hazards. The DMA 2000 is intended to facilitate cooperation between state and local authorities, prompting them to work together. This enhanced planning will better enable local and state governments to articulate accurate needs for mitigation, resulting in faster allocation of funding and more effective risk reduction projects.

#### 1.1.1 DMA 2000 Origins -The Robert T. Stafford Disaster Relief and Emergency Assistance Act

In the early 1990s, a new federal policy regarding disasters began to evolve. Rather than simply reacting whenever disasters strike communities, the federal government began encouraging communities to first assess their vulnerability to various disasters and proceed to take actions to reduce or eliminate potential risks. The logic is simply that a disaster-resistant community can rebound from a natural disaster with less loss of property or human injury, at much lower cost and, consequently, more quickly. Moreover, other costs associated with disasters are minimized, such as the time lost from productive activity by business and industries.

National Benefit-Cost Ratio (BCR) Per Peril <small>*BCR numbers in this study have been rounded</small>	Beyond Code Requirements	Federally Funded
<b>Overall Hazard Benefit-Cost Ratio</b>	<b>\$4:1</b>	<b>\$6:1</b>
<b>Riverine Flood</b>	<b>\$5:1</b>	<b>\$7:1</b>
<b>Hurricane Surge</b>	<b>\$7:1</b>	Too few grants
<b>Wind</b>	<b>\$5:1</b>	<b>\$5:1</b>
<b>Earthquake</b>	<b>\$4:1</b>	<b>\$3:1</b>
<b>Wildland-Urban Interface Fire</b>	<b>\$4:1</b>	<b>\$3:1</b>

*Natural hazard mitigation saves \$6 on average for every \$1 spent on federal mitigation grants (FEMA 2018).*

The DMA 2000 provides an opportunity for states, tribes, and local governments to take a new and revitalized approach to mitigation planning. The DMA 2000 amended the Stafford Act by repealing the previous mitigation planning provisions (Section 409) and replacing them with a new set of requirements (Section 322). This section sets forth the requirements that communities evaluate natural hazards within their respective





jurisdictions and develop an appropriate plan of action to mitigate those hazards, while emphasizing the need for state, tribal, and local governments to closely coordinate mitigation planning and implementation efforts.

The amended Stafford Act requires that each local jurisdiction identify potential natural hazards to the health, safety, and well-being of its residents, and identify and prioritize actions that can be taken by the community to mitigate those hazards—before disaster strikes. For communities to remain eligible for hazard mitigation assistance from the federal government, they must first prepare, and then maintain and update an HMP (this plan).

Responsibility for fulfilling the requirements of Section 322 of the Stafford Act and administering the FEMA Hazard Mitigation Program has been delegated to the State of New Jersey, specifically to NJOEM. FEMA also provides support through guidance, resources, and plan reviews.

**1.1.2 Benefits of Mitigation Planning**

The planning process will help prepare citizens and government agencies to better respond when disasters occur. In addition, mitigation planning allows Burlington County as a whole, as well as the participating municipalities, to remain eligible for mitigation grant funding for mitigation projects that will reduce the impact of future disaster events. The long-term benefits of mitigation planning include:

- An increased understanding of hazards faced by Burlington County and its communities;
- Building a more sustainable and disaster-resistant county;
- Increasing education and awareness of hazards and their threats, as well as their risks;
- Building relationships by involving residents, organizations, and businesses;
- Financial savings through partnerships that support planning and mitigation efforts;
- Focused use of limited resources on hazards that have the biggest impact on the community; and
- Reduced long-term impacts and damages to human health and structures and reduced repair costs.

**1.1.3 Organizations Involved in the Mitigation Planning Effort**

Burlington County and the participating jurisdictions intend to implement this HMP with full coordination and participation of county and local departments, organizations and groups, as well as by coordinating with relevant state and federal entities. Coordination helps to ensure that stakeholders have established communication channels and relationships necessary to support mitigation planning and mitigation actions included in Section 6 (Mitigation Strategy) and Section 9 (Jurisdictional Annexes). In addition to Burlington County, all municipalities have participated in the planning process (Table 1-1 and Figure 1-1).

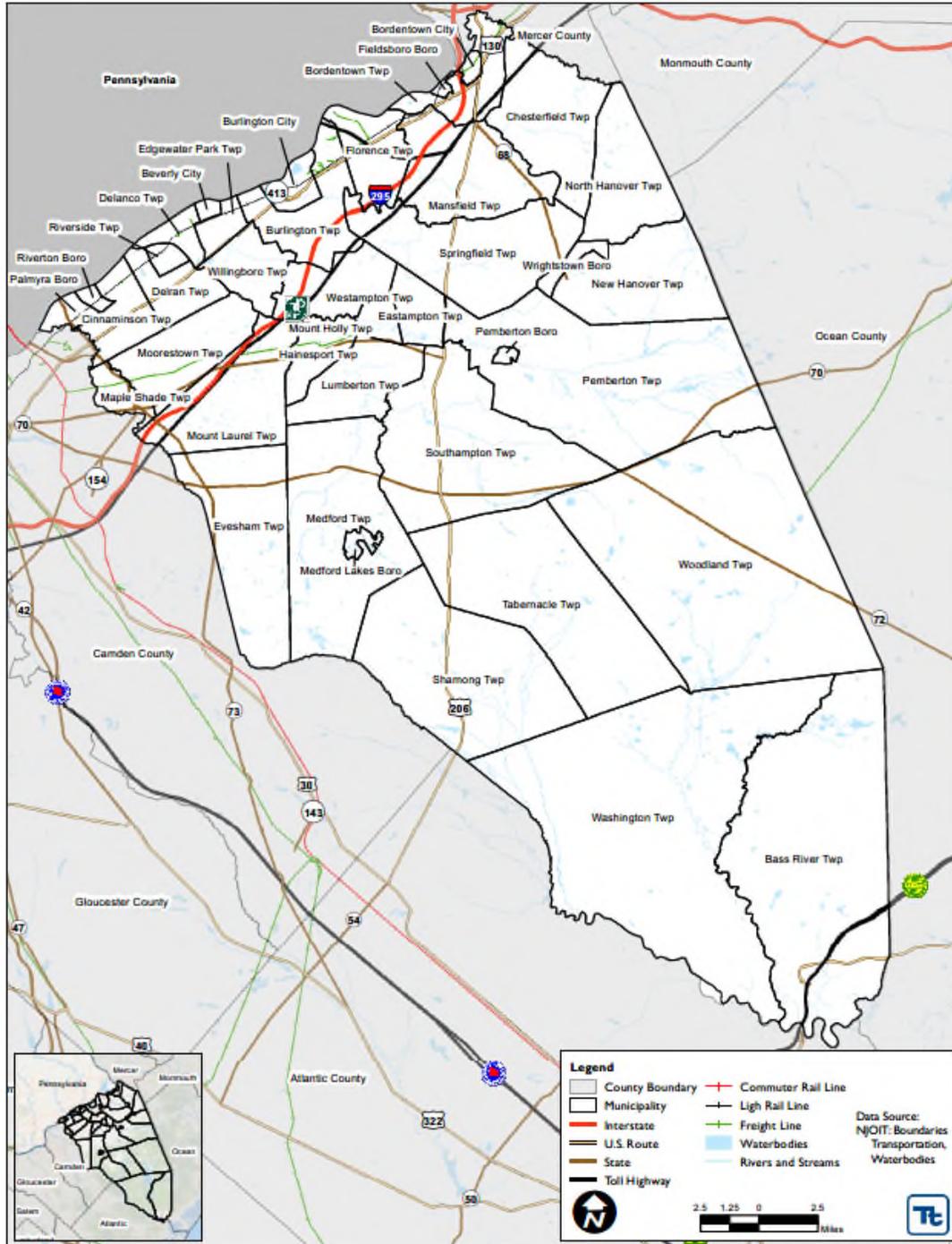
**Table 1-1. Participating Jurisdictions in Burlington County**

Jurisdictions		
City of Beverly	Township of Florence	Township of Southampton
City of Bordentown	Township of Hainesport	Township of Springfield
City of Burlington	Township of Lumberton	Township of Tabernacle
Township of Bass River	Township of Mansfield	Township of Washington
Township of Bordentown	Township of Maple Shade	Township of Westampton
Township of Burlington	Township of Medford	Township of Willingboro
Township of Chesterfield	Township of Moorestown	Township of Woodland
Township of Cinnaminson	Township of Mount Holly	Borough of Fieldsboro
Township of Delanco	Township of Mount Laurel	Borough of Medford Lakes
Township of Delran	Township of New Hanover	Borough of Palmyra



Jurisdictions		
Township of Eastampton	Township of North Hanover	Borough of Pemberton
Township of Edgewater Park	Township of Pemberton	Borough of Riverton
Township of Evesham	Township of Riverside	Borough of Wrightstown
	Township of Shamong	

Figure 1-1. Burlington County, New Jersey Mitigation Plan Area





## Multiple Agency Support for Hazard Mitigation

Primary responsibility for the development and implementation of mitigation strategies and policies lies with local governments. However, local governments are not alone; various partners and resources at the regional, state, and federal levels are available to assist communities in the development and implementation of mitigation strategies. Within New Jersey, NJOEM is the lead agency providing hazard mitigation planning assistance and guidance to local jurisdictions. In addition, FEMA provides grants, tools, guidance, and training to support mitigation planning.

Additional input and support for this planning effort was obtained from a range of agencies and through public involvement, as discussed in Section 3 (Planning Process). Under the project management of the Burlington County Office of Emergency Management (Burlington OEM), oversight for the preparation of this HMP was provided by the Burlington County Hazard Mitigation Steering and Planning Committees. Details regarding the roles and responsibilities of the Steering and Planning Committees are also further discussed in Section 3. The Steering Committee, consisting of representatives from county departments, has been formed to plan, guide, expedite, and implement the planning process. A list of Steering Committee and Planning Committee members is provided in Section 3.

This HMP update was prepared in accordance with the following regulations and guidance:

- FEMA *Local Mitigation Planning Handbook*, March 2013
- FEMA *Integrating Hazard Mitigation into Local Planning*, March 1, 2013
- FEMA *Plan Integration: Linking Local Planning Efforts*, July 2015
- *Local Mitigation Plan Review Guide*, October 1, 2011
- DMA 2000 (Public Law 106-390, October 30, 2000)
- 44 Code of Federal Regulations (CFR) Parts 201 and 206 (including: Feb. 26, 2002, Oct. 1, 2002, Oct. 28, 2003, and Sept. 13, 2004 Interim Final Rules)
- FEMA *How-To Guide for Using HAZUS-MH for Risk Assessment*. FEMA Document No. 433, February 2004
- FEMA *Mitigation Planning How-to Series* (FEMA 386-1 through 4, 2002), available at: <http://www.fema.gov/fima/planhowto.shtm>.
- FEMA *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*, January 2013

Table 1-2 summarizes the requirements outlined in the DMA 2000 Interim Final Rule and where each of these requirements is addressed in this HMP.

**Table 1-2. FEMA Local Mitigation Plan Review Tool**

Plan Criteria	Primary Location in the 2019 HMP
<b>Prerequisites</b>	
Adoption by the Local Governing Body: §201.6(c)(5)	Volume I, Section 2.0; Appendix A
<b>Planning Process</b>	
Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)	Volume I, Section 3.0
<b>Risk Assessment</b>	
Identifying Hazards: §201.6(c)(2)(i)	Volume I, Section 5.2
Profiling Hazards: §201.6(c)(2)(i)	Volume I, Section 5.4
Assessing Vulnerability: Overview: §201.6(c)(2)(ii)	Volume I, Section 5.4
Assessing Vulnerability: Identifying Structures: §201.6(c)(2)(ii)(A)	Volume I, Section 4.0 Volume I Section 5.4
Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)	Volume I, Section 5.4



Plan Criteria	Primary Location in the 2019 HMP
Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)	Volume I, Section 4.0; Volume II, Section 9 Annexes
<b>Mitigation Strategy</b>	
Local Hazard Mitigation Goals: §201.6(c)(3)(i)	Volume I, Section 6.0; Volume II, Section 9 Annexes
Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)	Volume I, Section 6.0; Volume II, Section 9 Annexes
Implementation of Mitigation Actions: §201.6(c)(3)(iii)	Volume I, Section 6.0; Volume II, Section 9 Annexes
Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)	Volume I, Section 6.0; Volume II, Section 9 Annexes
<b>Plan Maintenance Process</b>	
Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(i)	Volume I, Section 7.0
Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)	Volume I, Section 7.0; Volume II, Section 9 Annexes
Continued Public Involvement: §201.6(c)(4)(iii)	Volume I, Section 7.0

### 1.1.4 Organization

The Burlington County HMP update is organized as a two-volume plan to facilitate use of this plan as a resource for each participant. Volume I provides information on the overall planning process, and the natural hazard profiling and vulnerability assessments which served as a basis for the understanding of risk and identification of appropriate mitigation actions. As such, Volume I is intended for use as a resource for on-going mitigation analysis. Volume II consists of an annex dedicated to each participating jurisdiction. Each annex summarizes the jurisdiction’s legal, regulatory, and fiscal capabilities; vulnerabilities to natural hazards; status of past mitigation actions; and provides an individualized mitigation strategy. The annexes are intended to provide an expedient resource for each jurisdiction for implementation of mitigation projects and future grant opportunities, as well as place for each jurisdiction to record and maintain their local aspect of the countywide plan.

### Hazards of Concern

Burlington County and participating jurisdictions reviewed the natural hazards that caused measurable impacts in the planning area and updated the list of hazards of concern based on events, losses, and information available since the 2014 HMP. Burlington County and participating jurisdictions evaluated the risk and vulnerability due to each of the hazards of concern on the assets of each participating jurisdiction. Although the resulting hazard risk rankings varied for each jurisdiction, the summary risk rankings corresponded with that of Burlington County and are indicated in each jurisdictional annex. The hazard risk ranks were used to focus and prioritize individual jurisdictional mitigation strategies.

### Goals and Objectives

The planning process included a review and update of the prior mitigation goals, and the addition of all new objectives as a basis for the planning process and to guide the selection of appropriate mitigation actions addressing all hazards of concern. Further, the goal development process considered the mitigation goals expressed in the State of New Jersey HMP, as well as other relevant county and local planning documents, as discussed within Section 6 (Mitigation Strategy).

### Plan Integration into Other Planning Mechanisms

Plan integration is the process by which jurisdictions look at their existing planning framework and align efforts with the goal of building a safer, smarter, and more resilient community. It is specific to each community and depends on the vulnerability of the built environment. Community-wide plan integration supports risk reduction



through various planning and development measures, both before and after a disaster. Plan integration involves a community's plans, policies, codes, and programs that guide development and the roles of people and government in implementing these capabilities. Successful integration occurs through collaboration among a diverse set of stakeholders in the community (FEMA 2015).

Effective mitigation is achieved when hazard awareness and risk management approaches and strategies become an integral part of public activities and decision-making. Within the county there are many existing plans and programs that support hazard risk management, and thus it is critical that this HMP integrate and coordinate with, and complement, those mechanisms.

The *Capability Assessment* in Section 6 (Mitigation Strategy) provides a summary and description of the existing plans, programs, and regulatory mechanisms at all levels of government (federal, state, county and local) that support hazard mitigation within Burlington County. Within each jurisdictional annex (Section 9), Burlington County and each participating jurisdiction identified how they have integrated hazard risk management into their existing planning, regulatory, and operational/administrative framework ("integration capabilities"), and how they intend to promote this integration ("integration actions").

### **1.1.5 Implementation of the 2014 Hazard Mitigation Plan**

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The status of the mitigation projects identified in the 2014 Burlington County HMP are provided in Section 6 (Mitigation Strategy) and Section 9 (Jurisdictional Annexes) of the plan update. Numerous projects and programs have been implemented that have reduced hazard vulnerability to assets in the planning area. The county and municipal annexes, and plan maintenance procedures in Section 7 (Plan Maintenance), have been developed to encourage specific activities such as review of the HMP during update of codes, ordinances, zoning, and development to ensure that a more thorough integration, with its related benefits, will be completed within the upcoming five-year planning period.

### **1.1.6 Implementation of the Planning Process**

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The planning process and findings are to be documented in local HMPs. To support the planning process in developing this HMP update, Burlington County and the participating jurisdictions have accomplished the following:

- Developed a Steering Committee and Planning Committee
- Reviewed the 2014 *Burlington County HMP*
- Identified/reviewed hazards that are of greatest concern to the county (hazards of concern) to be included in the update
- Profiled these hazards
- Estimated the assets at risk and potential losses associated with these hazards
- Reviewed and updated the mitigation goals and added objective
- Reviewed the 2014 mitigation strategy and actions to indicate progress
- Developed new mitigation actions to address reduction of vulnerability of hazards of concern
- Involved a wide range of stakeholders and the public in the HMP update process
- Updated mitigation plan maintenance procedures to be executed after obtaining approval of the plan from NJOEM and FEMA

As required by the DMA 2000, Burlington County and participating jurisdictions have informed the public on the planning process and provided opportunities for public comment and input. In addition, numerous agencies



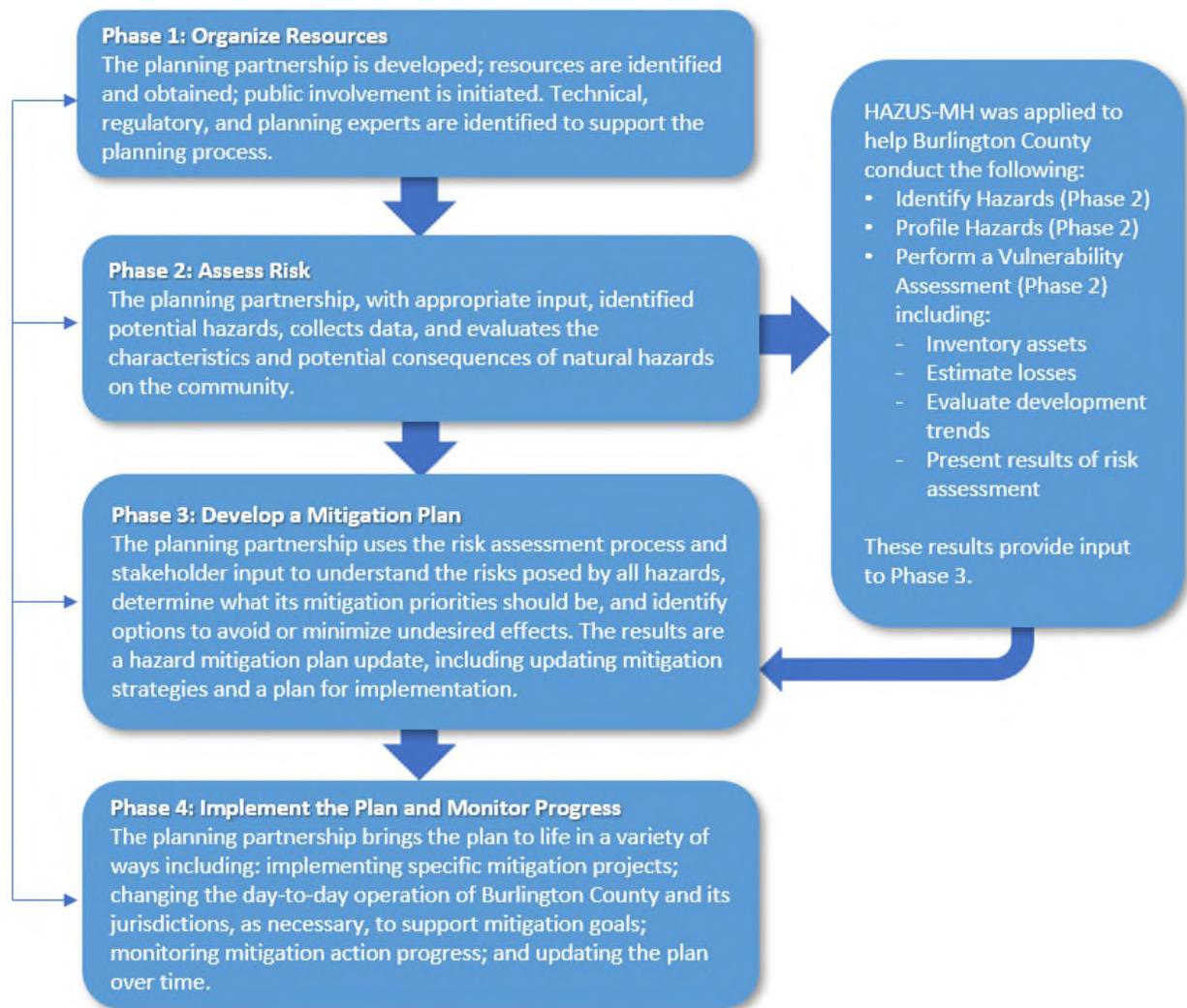
and stakeholders have participated as core or support members, providing input and expertise throughout the planning process.

This HMP update documents the process and outcomes of Burlington County and the jurisdictions' efforts. Section 2 (Plan Adoption) includes documentation that the prerequisites for plan approval have been met. Section 3 (Planning Process) includes additional information on the process to develop this plan update.

### 1.1.7 Organization of this Mitigation Plan

This HMP update was organized in accordance with FEMA and NJOEM guidance. The structure of this HMP update follows the four-phase planning process recommended by FEMA and is summarized in Figure 1-2.

Figure 1-2. Burlington County Hazard Mitigation Planning Process



As noted earlier, the HMP is organized into two volumes: Volume I includes all information that applies to the entire planning area (Burlington County); and Volume II includes participating jurisdiction-specific information.

Volume I of this HMP includes the following sections:



**Section 1:** Introduction: Overview of participants and planning process.

**Section 2:** Plan Adoption: Information regarding the adoption of the HMP update by Burlington County and each participating jurisdiction.

**Section 3:** Planning Process: A description of the HMP update methodology and development process; Steering Committee, Planning Committee, and stakeholder involvement efforts; and a description of how this HMP update will be incorporated into existing programs.

**Section 4:** County Profile: An overview of Burlington County, including: (1) general information, (2) economy, (3) land use trends, (4) population and demographics, (5) general building stock inventory and (6) critical facilities.

**Section 5:** Risk Assessment: Documentation of the hazard identification and hazard risk ranking process, hazard profiles, and findings of the vulnerability assessment (estimates of the impact of hazard events on life, safety and health; general building stock; critical facilities; and the economy). Description of the status of local data and planned steps to improve local data to support mitigation planning.

**Section 6:** Mitigation Strategy: Information regarding the updated mitigation goals and objectives identified by Burlington County; capability assessment; and mitigation strategy development and update are included in this section.

**Section 7:** Plan Maintenance: The system established by Burlington County to continue to monitor, evaluate, maintain, and update the HMP.

Volume II of this plan includes the following sections:

**Section 8:** Planning Partnership: Description of the planning partnership, and jurisdictional annexes.

**Section 9:** Jurisdictional Annexes: A jurisdiction-specific annex for each participating municipality and Burlington County containing their hazards of concern, hazard risk ranking, capability assessments, new/updated mitigation actions, action prioritization specific only to Burlington County or that jurisdiction, progress on 2014 mitigation actions, and an overview of plan integration into local planning processes.

Appendices include:

**Appendix A:** Resolutions of HMP Adoption: Resolutions from the county and each jurisdiction will be included as they formally adopt the HMP update.

**Appendix B:** Meeting Documentation: Agendas, attendance sheets, minutes, and other documentation (as available and applicable) of planning meetings convened during the development of the HMP.

**Appendix C:** Participation Matrix: A matrix is presented to give a broad overview of who attended meetings and when input was provided to the HMP update.

**Appendix D:** Public and Stakeholder Outreach Documentation: Documentation of the public and stakeholder outreach effort including webpages, informational materials, public and stakeholder meetings and presentations, surveys, and other methods used to receive and incorporate public and stakeholder comment and input to the plan update process.

**Appendix E:** Mitigation action worksheet template, instructions.



**Appendix F:** FEMA 386-4 Guidance Worksheets: Examples of plan review templates available to support annual plan review.

**Appendix G:** FEMA Plan Review Tools: Examples of plan review templates available to support annual plan review.

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