



# SECTION 1. INTRODUCTION

## 1.1 PURPOSE

Burlington County and its participating jurisdictions (the Planning Partnership) have prepared this Hazard Mitigation Plan (HMP) to better protect residents and property throughout the County from the effects of hazard events. This plan demonstrates the Planning Partnership's commitment to reducing risk from hazards, increasing resilience overall, and helping decision makers integrate mitigation into their day-to-day processes. This plan was also developed to position the Planning Partners for eligibility of pre- and post-disaster Federal Emergency Management Agency (FEMA) grants, including Hazard Mitigation Assistance (HMA) grant programs, which include the Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), and Flood Mitigation Assistance (FMA). This plan also aligns with the planning elements of the National Flood Insurance Program's (NFIP's) Community Rating System (CRS) which provides for lower flood insurance premiums in CRS communities.

## 1.2 BACKGROUND

An HMP is a living document that communities use to reduce their vulnerability to hazards. It forms the foundation for a community's long-term strategy to reduce disaster losses and creates a framework for decision making to reduce damage to lives, property, and the economy from future disasters. Examples of mitigation projects include home acquisitions or elevations to remove structures from high-risk areas, upgrades to critical public facilities, and infrastructure improvements. Ultimately, these actions reduce vulnerability, and communities are able to recover more quickly from disasters. The Planning Partnership demonstrated its commitment to reducing disaster losses by developing its initial HMP in 2019.

**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.

In response to federal requirements that local governmental agencies update their HMP every five years (Code of Federal Regulations Title 44 [44 CFR] Section 201.3) this plan serves as the 2024 update to the 2019 Burlington County Hazard Mitigation Plan. The 2024 update incorporates the newest information upon which to base a successful mitigation strategy that will reduce the impacts of natural disasters and increase the resilience of the Planning Partnership. The plan has been updated with a focus on examining changes in vulnerability due to hazard events, reviewing capabilities and how hazard mitigation is implemented, reviewing the mitigation strategy, and identifying new mitigation actions to increase overall resilience in the Planning Area, which consists of all of Burlington County.

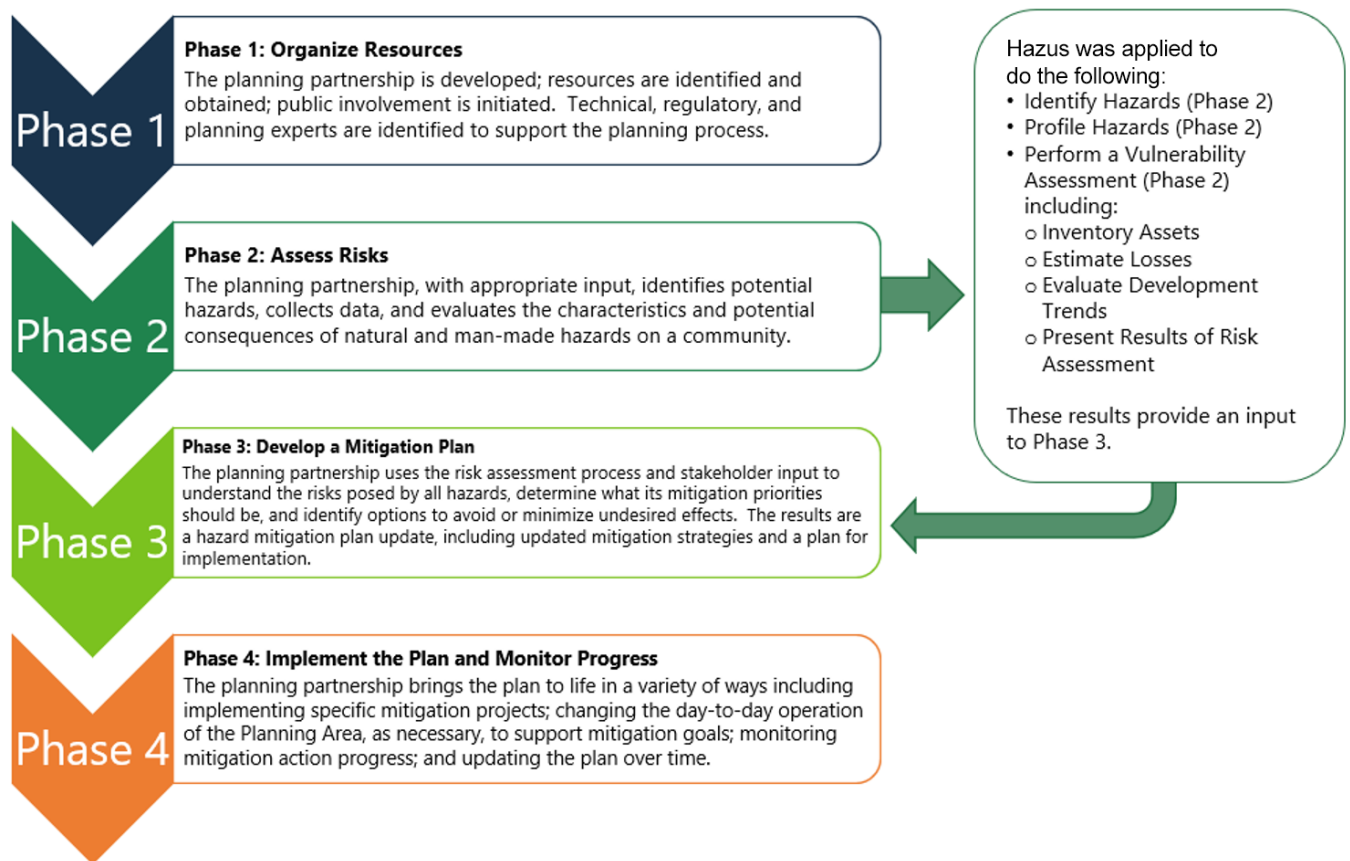


## 1.3 PLAN ORGANIZATION

The Burlington County HMP 2024 Update is organized as a two-volume plan and is in alignment with New Jersey Office of Emergency Management (NJOEM) planning requirements, the 2023 FEMA Local Mitigation Planning Handbook, the FEMA Local Mitigation Plan Review Tool, and the 2023 FEMA Local Mitigation Planning Policy Guide.

Volume I describes the planning process (see Figure 1-1) and presents hazard profiles and vulnerability assessments that serve as a basis for understanding risk and identifying mitigation actions. It is intended for use as a resource for ongoing mitigation analysis.

Figure 1-1. Burlington County Hazard Mitigation Planning Process



Volume I includes the following sections:

- **Section 1—Introduction:** HMP background and organization; and a summary of key changes from the previous HMP.
- **Section 2—Planning Process:** Description of the HMP development process, Steering Committee and Planning Partnership formation, stakeholder and public involvement efforts, and approach to incorporating this HMP into existing programs.



- **Section 3—County Profile:** Overview of the Planning Area, including physical setting, land use, land use trends, population and demographics, general building stock, critical facilities, and lifelines.
- **Section 4—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, health, general building stock, critical facilities, the economy); description of the status of local data; and planned steps to improve local data to support mitigation planning.
- **Section 5—Capability Assessment:** A summary and description of the existing plans, programs, and regulatory mechanisms at all levels of government (federal, state, county, local) that support hazard mitigation within the Planning Area.
- **Section 6—Mitigation Strategy:** Information regarding mitigation goals and objectives in response to priority hazards of concern and the process by which the Planning Partnership's mitigation strategies have been developed or updated.
- **Section 7—Plan Maintenance:** System to continue to monitor, evaluate, maintain, and update the HMP.

Volume II provides an annex dedicated to each participating jurisdiction. Each annex summarizes the jurisdiction's legal, regulatory, and fiscal capabilities; identifies vulnerabilities to hazards; documents mitigation plan integration with other planning efforts; records status of past mitigation actions; and presents an individualized mitigation strategy. The annexes provide each jurisdiction a resource for implementing mitigation projects and pursuing future grant opportunities, as well as a place for each jurisdiction to record and maintain their local aspect of the multi-jurisdictional plan. Volume II includes the following sections:

- **Section 8—Planning Partnership:** Description of the Planning Partnership, members' responsibilities, and the content of jurisdictional annexes.
- **Section 9—Annexes:** Jurisdiction-specific annexes describing the jurisdiction's hazards of concern, hazard ranking, capability assessment, mitigation actions, action prioritization, progress on prior mitigation activities (as applicable), and prior HMP integration into local planning processes.

Appendices include the following:

- **Appendix A—Plan Adoption:** Resolutions from all participating jurisdictions, included as each formally adopts the HMP update.
- **Appendix B—Participation Documentation:** Matrix to give a broad overview of who attended meetings and when input was provided to the HMP update, along with worksheets submitted during workshops conducted throughout the planning process.
- **Appendix C—Meeting Documentation:** Agendas, attendance sheets, minutes, and other documentation (as available and applicable) of planning meetings convened during the development of the plan.



- **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 process.
- **Appendix E—Mitigation Strategy Supplementary Data:** Documentation of the broad range of actions identified during the mitigation process; types of mitigation actions; the mitigation catalog developed using jurisdiction input, and potential mitigation funding sources.
- **Appendix F—Plan Maintenance Tools:** Examples of plan review tools and templates available to support annual plan review.
- **Appendix G—Critical Facilities Inventory:** A full list of critical facilities identified for the update of the HMP. Due to the sensitive nature of the information, some details have been omitted.
- **Appendix H—Linkage Procedures:** Includes steps to be followed by non-participating local governments and other local jurisdictions within the Planning Area (fire districts, utility districts, school districts, and any other eligible local government as defined in 44 CFR 201.2) to join this plan as a participating jurisdiction and achieve approved status.

## 1.4 THE PLAN UPDATE – WHAT IS DIFFERENT?

The 2024 HMP update builds on the previous plan and includes the following changes and enhancements:

- Updated data and tools were used for a more detailed and accurate risk assessment.
- The risk assessment was prepared to better support future grant applications by providing risk and vulnerability information that would directly support the measurement of “cost-effectiveness” required under FEMA mitigation grant programs.
- Hazards of concern were reorganized to more accurately reflect risk and mitigation needs within the County.
- Increased outreach to neighboring communities and stakeholders was conducted.
- Increased emphasis was given to the impact of hazards on socially vulnerable and underserved populations and the development of mitigation strategies to protect these groups.

The plan update continues to identify implementable actions, with enough information to serve as the basis for policy and funding decisions and represent measurable impacts on resilience and mitigation progress. The HMP’s strategies provide direction, and its actions are fundable under grant programs.

In accordance with FEMA guiding principles for inclusive participation, the Planning Partnership will place a high priority on an expanded effort on stakeholder participation with local planning committees in future plan updates.

Table 1-1 indicates the major changes between the two plans as they relate to 44 CFR planning requirements.



Table 1-1. Table Title

44 CFR Requirement	2019 HMP	2024 Updated Plan
<p><i>Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:</i></p> <p><i>(1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;</i></p> <p><i>(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 non-profit interests to be involved in the planning process; and</i></p> <p><i>(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.</i></p>	<p>The 2019 planning effort followed an outreach strategy utilizing multiple media developed and approved by the Steering Committee. This strategy involved the following:</p> <ul style="list-style-type: none"> <li>▪ Public participation on an oversight Steering Committee.</li> <li>▪ Establishment of a plan informational website.</li> <li>▪ Press releases.</li> <li>▪ Use of a public information survey.</li> <li>▪ Using social media.</li> <li>▪ Web-deployed survey.</li> </ul> <p>The 2019 planning process identified key stakeholders and coordinated with them throughout the process. A comprehensive review of relevant plans and programs was performed by the planning team.</p>	<p>Building upon the success of the 2019 plan, the 2024 planning effort deployed the same public engagement methodology. The plan included the following enhancements:</p> <ul style="list-style-type: none"> <li>▪ Key County and local department personnel and public stakeholders formed a Steering Committee for the plan.</li> <li>▪ A standalone project-specific website was developed to keep the public informed of the planning process and how to get involved and allowed for review/comment on the draft plan.</li> <li>▪ A StoryMap was implemented as another form of public outreach, which provided an interactive way to learn about the planning process and review the HMP.</li> <li>▪ Draft plan deliverables were made available on the County and multiple municipal websites.</li> <li>▪ All Steering Committee and Planning Partnership meetings were open to the public.</li> <li>▪ Outreach and coordination with key stakeholders was expanded.</li> <li>▪ A comprehensive review of relevant plans and programs was performed.</li> </ul>
<p><i>§201.6(c)(2): The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.</i></p>	<p>The 2019 plan included a risk assessment of hazards of concern. The risk assessment included frequency of return, approximate annualized losses, historical occurrences, a description of general vulnerability, climate change impacts, secondary hazards, critical facilities and infrastructure, discussion on vulnerabilities, and future development trends.</p>	<p>The 2024 plan update includes a comprehensive update to the risk assessment. New and updated hazards of concern were included. Jurisdiction-specific risk assessment results are summarized in Section 4 (Risk Assessment) and in each jurisdictional annex (Section 9).</p>



44 CFR Requirement	2019 HMP	2024 Updated Plan
<p>§201.6(c)(2)(i): <i>[The risk assessment] shall include a] description of the ... location and extent of all-natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.</i></p>	<p>The 2019 plan presented a risk assessment of each hazard of concern. Each section included the following:</p> <ul style="list-style-type: none"> <li>▪ Hazard profile, including maps of extent and location, previous occurrences, and probability of future events.</li> <li>▪ Climate change impacts on future probability using the best available data for the State of New Jersey.</li> <li>▪ Vulnerability assessment including impact on life, safety, and health, general building stock, critical facilities, and the economy, as well as future changes that could impact vulnerability.</li> <li>▪ A summary of changes in vulnerability since the 2014 plan.</li> </ul>	<p>A similar, but adjusted format, using new and updated data, was used for the 2024 plan update. Each section of the risk assessment includes the following:</p> <ul style="list-style-type: none"> <li>▪ Hazard profile, including hazard description and types, maps of extent and location, previous occurrences, and probability of future events.</li> <li>▪ Climate change impacts on future probability</li> <li>▪ Vulnerability assessment including impact on life, safety, and health, general building stock, critical facilities, and the economy, as well as future changes that could impact vulnerability.</li> <li>▪ Discussions on how each hazard impacts socially vulnerable populations.</li> <li>▪ A summary of changes in vulnerability since the 2019 plan.</li> </ul>
<p>§201.6(c)(2)(ii): <i>[The risk assessment] shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i). This description shall include an overall summary of each hazard and its impact on the community.</i></p>	<p>A robust, quantitative vulnerability assessment was conducted for the 2019 plan, using new and updated asset and hazard data. Section 5.4 summarizes the planning area's vulnerability for each hazard of concern.</p>	<p>A robust, quantitative vulnerability assessment was conducted for the 2024 plan update, using new and updated asset and hazard data. Section 4.3 summarizes the planning area's vulnerability for each hazard of concern. The jurisdictional annexes include problem statements developed from the risk assessment.</p>
<p>§201.6(c)(2)(ii): <i>[The risk assessment] must also address National Flood Insurance Program insured structures that have been repetitively damaged by floods.</i></p>	<p>A summary of NFIP insured properties identified as repetitive loss and severe repetitive loss locations was included in each jurisdictional annex.</p>	<p>A summary of NFIP insured properties identified as repetitive loss and severe repetitive loss locations was included in the plan and each annex.</p>
<p>Requirement §201.6(c)(2)(ii)(A): <i>The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure and critical facilities located in the identified hazard area.</i></p>	<p>Quantitative and qualitative analyses were conducted using the updated hazard and inventory data as presented in Section 5 (Risk Assessment). In addition, critical facilities considered lifelines in accordance with FEMA's definition were identified.</p>	<p>Quantitative and qualitative analyses were conducted using the updated hazard and inventory data as presented in Section 4 (Risk Assessment). In addition, critical facilities considered lifelines in accordance with FEMA's updated definitions were identified.</p>



44 CFR Requirement	2019 HMP	2024 Updated Plan
<p><i>Requirement §201.6(c)(2)(ii)(B): [The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) and a description of the methodology used to prepare the estimate.</i></p>	<p>Loss estimates were generated for all hazards of concern by using readily available information.</p>	<p>Quantitative and qualitative analyses were conducted using the updated hazard and inventory data as presented in Section 4 (Risk Assessment). Estimated potential losses are reported in Section 4.3 and in the annexes for each jurisdiction.</p>
<p><i>Requirement §201.6(c)(2)(ii)(C): [The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.</i></p>	<p>A spatial analysis using identified growth areas, and potential new development identified by jurisdictions was conducted to determine if located in hazard areas. These results were reported to all participants and summarized in their annexes to discuss mitigation measures. In Section 5.4, projected changes in population and development are discussed in each hazard section and how these projected changes may lead to increased vulnerability or how plans, regulations, and ordinances in place will implement mitigation to protect the development.</p>	<p>A spatial analysis using identified growth areas, and potential new development identified by jurisdictions was conducted to determine if located in hazard areas. These results were reported to all participants and summarized in their annexes to discuss mitigation measures. In Section 4.3, projected changes in population and development are discussed in each hazard section and how these projected changes may lead to increased vulnerability or how plans, regulations, and ordinances in place will implement mitigation to protect the development.</p>
<p><i>§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.]</i></p>	<p>The 2019 plan contained goals, objectives, and actions. The identified actions covered multiple hazards and goals.</p>	<p>The Planning Partnership reviewed and updated the goals and created objectives. A mitigation strategy workshop with associated tools and guidance on problem statement development was deployed to inform the identification of mitigation actions. Actions that were completed or no longer considered to be feasible were removed. The balance of the actions was carried over to the 2024 plan, and in some cases, new actions were added to the action plan.</p>
<p><i>Requirement §201.6(c)(3)(i): [The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.</i></p>	<p>The Planning Partnership identified goals targeted specifically for this hazard mitigation plan. The planning component supported the actions identified in the plan.</p>	<p>The Planning Partnership reviewed and updated the goals and objectives. New objectives were identified to align with updated Planning Partnership priorities.</p>



44 CFR Requirement	2019 HMP	2024 Updated Plan
<p><i>Requirement §201.6(c)(3)(ii): [The mitigation strategy 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.</i></p>	<p>For each identified hazard, mitigation strategies were developed and prioritized using mitigation action worksheets. The mitigation actions were displayed in a table in each jurisdictional annex.</p>	<p>For the 2024 update, a mitigation catalog was developed to provide a comprehensive range of specific mitigation actions to be considered. Each mitigation action has its own action worksheet located in each jurisdictional annex. This action worksheet can be used for FEMA-eligible projects.</p>
<p><i>Requirement: §201.6(c)(3)(ii): [The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program, and continued compliance with the program's requirements, as appropriate.</i></p>	<p>Each jurisdictional annex included a description of how the jurisdiction participates in and implements the NFIP.</p>	<p>For the 2024 update, each jurisdictional annex includes a description on how the jurisdiction participates in and implements the NFIP.</p>
<p><i>Requirement: §201.6(c)(3)(iii): [The mitigation strategy shall describe] how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.</i></p>	<p>Each action was prioritized based on FEMA's STAPLEE criteria—the social, technical, administrative, political, legal, economic, and environmental factors necessary for the implementation of each action. The evaluation included a qualitative benefit and cost review. The results of the evaluation were used to identify the actions to include in the plan and assist with the prioritization.</p>	<p>A revised methodology based on the STAPLEE criteria and using new and updated data was used for the 2024 plan update. Fourteen criteria were used to evaluate each potential mitigation action. The evaluation included a qualitative review of benefit and cost. The results of the evaluation were used to identify actions to include in the plan and assist with the prioritization.</p>
<p><i>Requirement §201.6(c)(4)(i): [The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.</i></p>	<p>The 2019 plan details a plan maintenance strategy, giving a suggested schedule on when to review, revise, and maintain the plan. The 2019 plan maintenance strategy includes the use of the BATool<sup>SM</sup> to enable municipal and county representatives to directly access mitigation initiatives to easily update the status of each project, document successes or obstacles to implementation, and add or delete projects to maintain mitigation project implementation.</p>	<p>The 2024 plan details a plan maintenance strategy similar to that of the 2019 plan.</p>





44 CFR Requirement	2019 HMP	2024 Updated Plan
<p><i>Requirement §201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.</i></p>	<p>The 2019 plan details recommendations for incorporating the plan into other planning mechanisms.</p>	<p>The 2024 plan details recommendations for incorporating the plan into other planning mechanisms such as the following:</p> <ul style="list-style-type: none"> <li>▪ Comprehensive/Master Plan</li> <li>▪ Emergency Response Plan/ Emergency Operations Plan</li> <li>▪ Capital Improvement Programs</li> <li>▪ Municipal Code</li> </ul>
<p><i>Requirement §201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.</i></p>	<p>The 2019 plan details a strategy for continuing public involvement.</p>	<p>The 2019 plan maintenance strategy was carried over to the 2024 plan.</p>
<p><i>Requirement §201.6(c)(5): [The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).</i></p>	<p>All the planning partners have adopted the plan.</p>	<p>Resolutions for each partner adopting the plan can be found in Appendix A.</p>