



Section 1. Introduction

1.1 BACKGROUND

Communities, residents, and businesses have been faced with continually increasing costs associated with both natural and man-made hazards. Hazard mitigation is the first step in reducing risk and is the most effective way to reduce costs associated with hazards. Monroe County and 30 participating jurisdictions located therein, have developed this Monroe County Hazard Mitigation Plan (MCHMP, also referred herein as the “Hazard Mitigation Plan” or the “plan”), which is a multi-jurisdictional, multi-hazard mitigation plan. The MCHMP includes countywide analysis and assessment of hazards, risk and capabilities and represents an update of the 2017 “Monroe County Hazard Mitigation Plan.” The plan has been prepared following the requirements of the federal Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 amends the 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 the development of multi-jurisdictional hazard mitigation plans, and the New York State Division of Homeland Security and Emergency Services (DHSES) also supports plan development for jurisdictions in New York State.

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, DMA 2000 requires that states, with support from local governmental agencies, update HMPs on a 5-year basis to prepare for and reduce the potential impacts of natural hazards. DMA 2000 is intended to facilitate cooperation between state and local authorities, prompting them to work together. This enhanced planning process 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.

Monroe County has been included in 21 FEMA (major and emergency) declarations since 1954.

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

The **Federal Emergency Management Agency (FEMA)** estimates that for every dollar spent on damage prevention (mitigation), twice that amount is saved by not having to perform post-disaster repairs.

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 policy is based on the logic 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.

DMA 2000 provides an opportunity for states, tribes, and local governments to take a new and revitalized approach to mitigation planning. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions (Section 409) and replacing them with a new set of requirements (Section 322). Section 322 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.

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 York, specifically to NYS DHSES. FEMA also provides support through guidance, resources, and plan reviews.

1.1.2 Benefits of Mitigation Planning

Effective mitigation planning will help prepare citizens and government agencies to better prepare for and respond when disasters occur. Also, mitigation planning allows Monroe County as a whole, including the participating Monroe County city, towns, and villages, 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 and implementation include:

- An increased understanding of hazards faced by Monroe County communities
- A more sustainable and disaster-resistant community
- 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
- Reduced long-term impacts and damages to human health and structures
- Reduced costs associated with response and recovery efforts, including repairs

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

Source: FEMA 2018; Federal Insurance Mitigation Administration 2018
 Note: Natural hazard mitigation saves \$6 on average for every \$1 spent on federal mitigation grants.

1.1.3 Organizations Involved in the Mitigation Planning Effort

Monroe County and the participating jurisdictions have prepared this hazard mitigation plan with full coordination and participation of county and local government, relevant organizations and groups, as well as state and federal agencies and the general public. Coordination helps to ensure that stakeholders have established communication channels and relationships necessary to support mitigation planning and mitigation actions included in Section 6 and in the jurisdictional annexes in Section 9. Including Monroe County, all 30 of the municipal governments in the County have participated in the planning process as indicated in Table 1-1 below.

Table 1-1. Participating Jurisdictions in Monroe County

Jurisdictions		
Monroe County	Town of Henrietta	Town of Riga





Jurisdictions		
Town of Brighton	Village of Hilton	City of Rochester
Village of Brockport	Village of Honeoye Falls	Town of Rush
Town of Chili	Town of Irondequoit	Village of Scottsville
Village of Churchville	Town of Mendon	Village of Spencerport
Town of Clarkson	Town of Ogden	Town of Sweden
Town/Village of East Rochester	Town of Parma	Town of Webster
Village of Fairport	Town of Penfield	Village of Webster
Town of Gates	Town of Perinton	Town of Wheatland
Town of Greece	Town of Pittsford	-
Town of Hamlin	Village of Pittsford	-

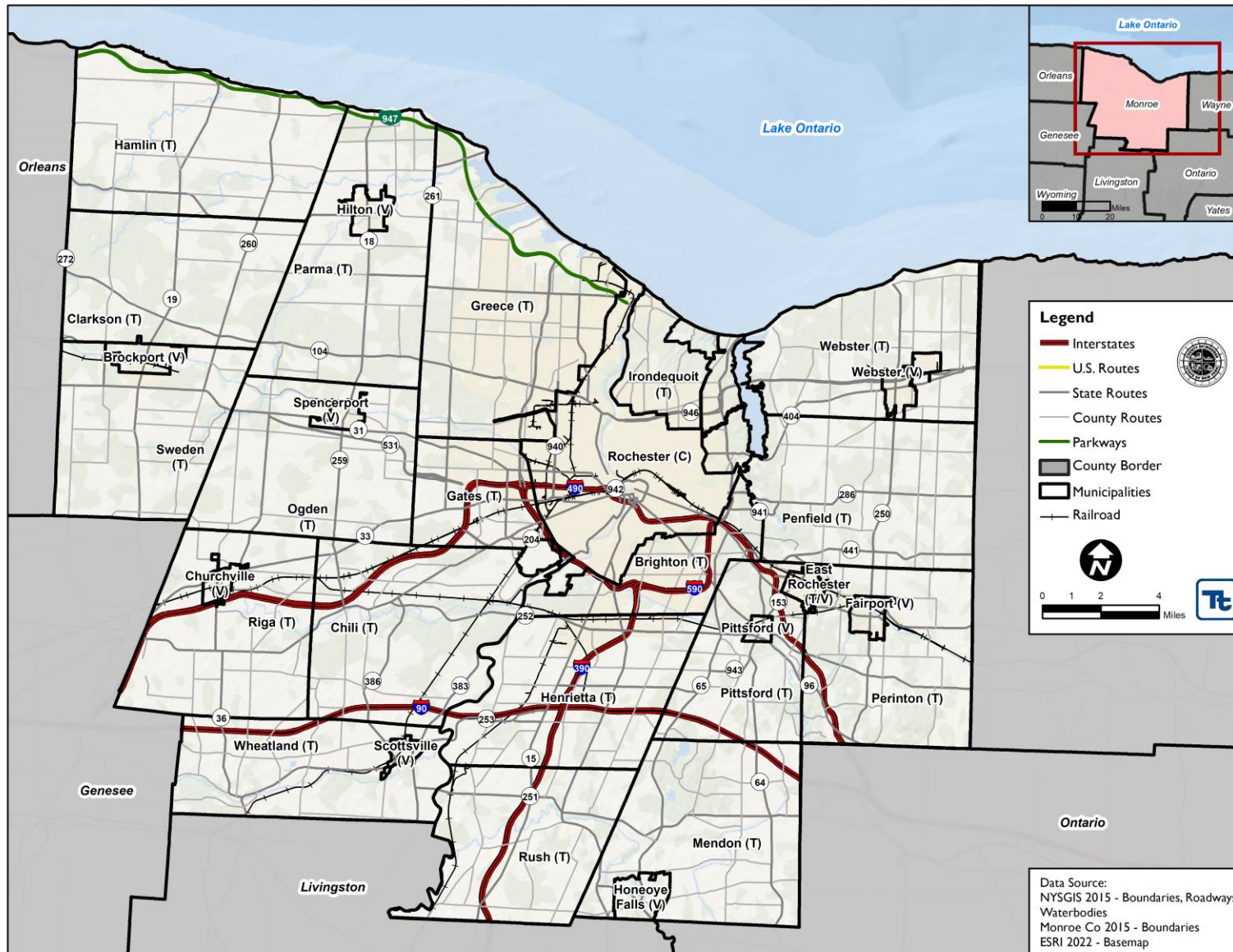
Multiple Agency Support for Hazard Mitigation

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 York State, NYS DHSES is the lead agency providing hazard mitigation planning assistance 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 wide range of agencies as well as through public involvement (as discussed in Section 3). Under the project management of the Monroe County Office of Emergency Management (OEM), the Monroe County Hazard Mitigation Steering Committee provided oversight for the preparation of this plan. Details regarding the roles and responsibilities of the Steering Committee and Planning Committee are further discussed in Section 3. The Steering Committee includes representatives from the Monroe County Office of Emergency Management, Department of Environmental Services, Geographic Information System Services, Rochester-Genesee Regional Transportation Authority (RGTA), Monroe County Soil & Water Conservation District, Monroe County School Superintendents, Monroe Community College, University of Rochester, City of Rochester, and Town of Irondequoit. The 30 participating municipalities provided significant input into the preparation of the plan, in particular the preparation of the annexes included in Section 9 for each municipality. Details regarding the roles and responsibilities of the various committees and other participants are further discussed in Section 3.



Figure 1-1. Monroe County, New York, Mitigation Plan Area





This hazard mitigation plan was prepared in accordance with the following regulations and guidance:

- FEMA *Local Mitigation Planning Policy Guide*, April 19, 2022.
- 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.shtml>
- FEMA *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards*, January 2013.
- NYS DHSES *Hazard Mitigation Planning Standard*, 2017.
- NYS DHSES Hazard Mitigation Plan

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

Table 1-2. FEMA Local Mitigation Plan Review Crosswalk

Plan Criteria	Primary Location in Plan
Prerequisites	
Adoption by the Local Governing Body: §201.6(c)(5)	Section 2.0; Appendix A
Planning Process	
Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)	Section 3.0
Risk Assessment	
Identifying Hazards: §201.6(c)(2)(i)	Sections 5.2
Profiling Hazards: §201.6(c)(2)(i)	Section 5.4
Assessing Vulnerability: Overview: §201.6(c)(2)(ii)	Section 5.4
Assessing Vulnerability: Identifying Structures: §201.6(c)(2)(ii)(A)	Section 4.0 Section 5.4
Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)	Section 5.4
Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)	Section 4.0; Section 9 Annexes
Mitigation Strategy	
Local Hazard Mitigation Goals: §201.6(c)(3)(i)	Section 6.0; Section 9 Annexes
Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)	Section 6.0; Section 9 Annexes
Implementation of Mitigation Actions: §201.6(c)(3)(iii)	Section 6.0; Section 9 Annexes
Multi-Jurisdictional Mitigation Actions: : §201.6(c)(3)(iv)	Section 6.0; Section 9 Annexes
Plan Maintenance Process	
Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(i)	Section 7.0
Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)	Section 7.0; Section 9 Annexes
Continued Public Involvement: §201.6(c)(4)(iii)	Section 7.0



Organization

The Monroe County Hazard Mitigation Plan has been organized into a two-volume plan to facilitate use of this plan as a resource for each participant. The plan provides a detailed review and analysis of each hazard of concern, resources, and relevant statistical information for Monroe County and participating municipalities.

Volume I is intended for use as a resource for on-going mitigation analysis. It includes a description of the county and local municipalities as well as information on mitigation planning and how the risk assessment and capability analysis was performed. Volume II consists of an annex dedicated to each participating jurisdiction. Each annex summarizes the jurisdiction’s legal, regulatory, and fiscal capabilities; evaluates vulnerabilities to natural hazards; describes the status of past mitigation actions; and provides specific mitigation strategies. The annexes are intended to provide an expedient resource for each jurisdiction for implementation of mitigation projects and maximizing future grant opportunities.

Hazard Mitigation Plan Goals and Objectives

According to CFR 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.” The mitigation goals have been developed based on the risk assessment results, discussions, research, and input from amongst the committee, existing authorities, polices, programs, resources, stakeholders, and the public.

The Monroe County Hazard Mitigation Plan planning process included a review and update of the prior mitigation goals and 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 New York State HMP, as well as other relevant county and local planning documents, as discussed in Section 6 (Mitigation Strategy).

2023 Monroe County Hazard Mitigation Plan Goals

- Goal 1:** Coordinate hazard mitigation programs and other planning efforts that affect the County.
- Goal 2:** Prevent hazards from negatively impacting new development.
- Goal 3:** Protect life, property, and the environment from current and future hazard impacts.
- Goal 4:** Increase public awareness of current and future hazards, their impacts, and ways to reduce vulnerability through education and outreach.
- Goal 5:** Protect, preserve, and restore the functions of natural systems.

Hazards of Concern

Monroe County and participating jurisdictions reviewed the natural hazards that caused measurable impacts based on events, losses, and information available since the development of the current Monroe County HMP (2017). Monroe 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 Monroe County and are indicated in each jurisdictional annex. The hazard risk ranks were used to focus and prioritize individual jurisdictional mitigation strategies.

Monroe County HMP Hazards of Concern

- Disease Outbreak
- Drought
- Earthquake
- Extreme Temperature
- Flood
- Hazardous Materials
- Infestation and Invasive Species
- Severe Storm
- Severe Winter Storm
- Wildfire



Plan Integration into Other Planning Mechanisms

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 hazard mitigation plan integrate, complement, and reference those plans and programs to the extent practical in order to be a comprehensive resource for hazard mitigation.

The “Capability Assessment” section of Chapter 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 the County. Within each jurisdictional annex in Chapter 9, the County and each participating jurisdiction have identified how they have integrated hazard risk management into their existing planning, regulatory and operational/administrative framework, and how they intend to continue to promote this integration. A further summary of these continued efforts to develop and promote a comprehensive and holistic approach to hazard risk management and mitigation is presented in Section 7.

1.1.4 Implementation of the 2017 Plan

The status of the mitigation projects identified in prior or existing local HMPS are provided in Section 6 (Mitigation Strategy) and Section 9 (Jurisdictional Annexes) of the plan. Numerous projects and programs have been implemented that have reduced hazard vulnerability to assets in the planning area. Those projects not completed have been reevaluated, modified as necessary and incorporated into this plan. The County and municipal annexes describe these mitigation activities in more detail, and plan maintenance procedures (Section 7) have been developed to encourage thorough integration with local decisions and processes and regular review of implementation progress.

1.1.5 Implementation of the Planning Process

To support the planning process in developing this plan, Monroe County and the participating jurisdictions have accomplished the following:

- Developed a Steering Committee and countywide Planning Partnership with municipalities and stakeholders.
- Reviewed the 2017 Monroe County Hazard Mitigation Plan
- Identified and reviewed hazards of greatest concern to the community (hazards of concern) to be included in the update
- Profiled hazards of concern
- Estimated the inventory at risk and potential losses associated with these hazards
- Reviewed and updated the mitigation goals and objectives
- Reviewed mitigation strategy and actions outlined in the 2017 HMP to indicate progress
- Developed new mitigation actions to reduce the vulnerability of assets from hazards of concern
- Involved a wide range of stakeholders and the public in the plan update process
- Developed mitigation plan maintenance procedures to be executed after obtaining approval of the plan from NYS DHSES and FEMA

As required by DMA 2000, Monroe County and participating jurisdictions have informed the public 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 the mitigation efforts of Monroe County and its jurisdictions. Additional information on the plan update process is included in Section 3, Planning Process. Documentation that the prerequisites for plan approval have been met is included in Section 2, Plan Adoption.

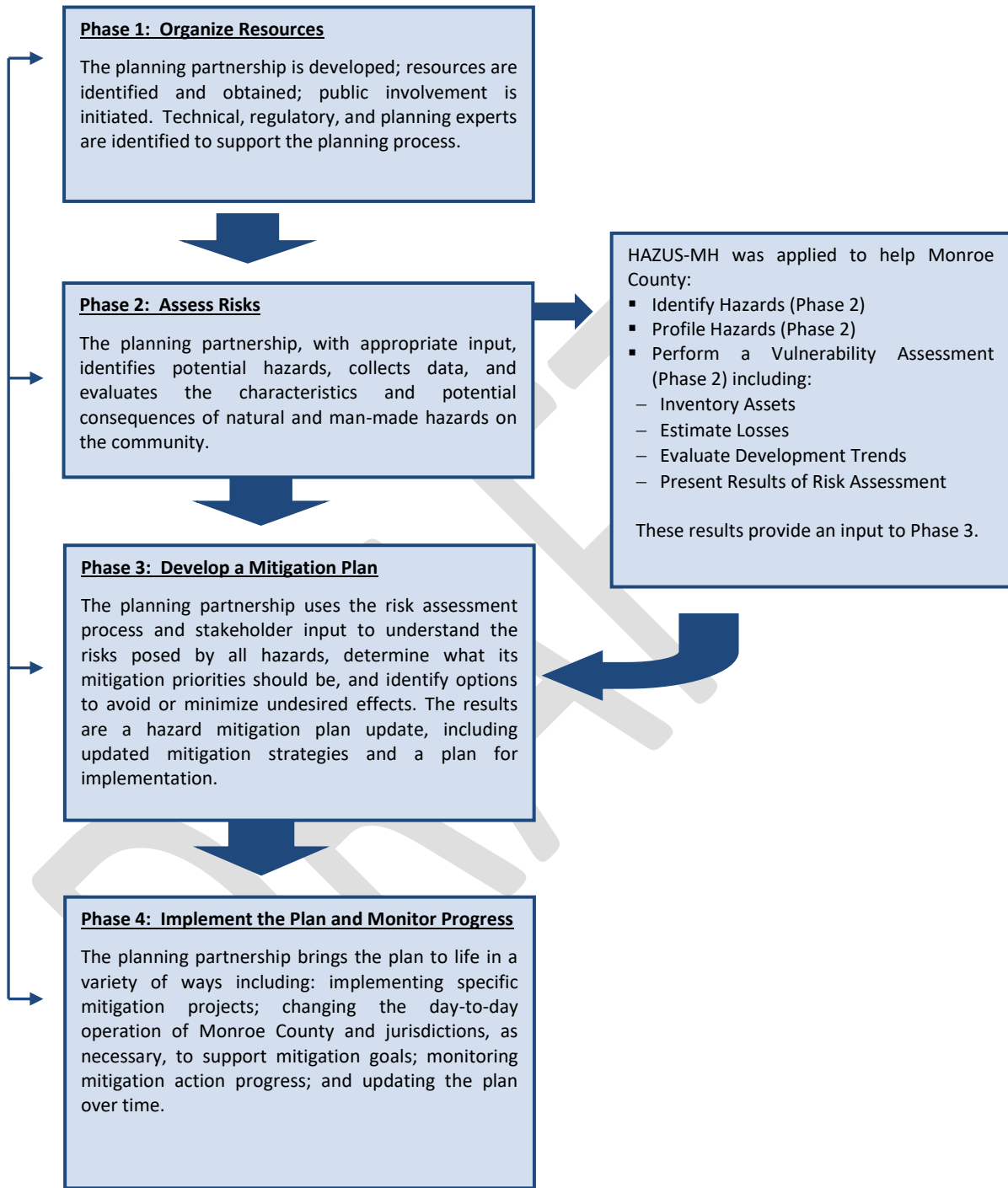
1.1.6 Organization of This Mitigation Plan

The planning effort followed the four-phase planning process recommended by FEMA and summarized in Figure 1-2.

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Figure 1-2. Monroe County Hazard Mitigation Planning Process





This plan was organized in accordance with FEMA and NYS DHSES guidance, organized into two volumes: Volume I includes all information that applies to the entire planning area (Monroe County); and Volume II includes specific information for the County as a jurisdiction as well as each participating jurisdiction.

More specifically, Volume I of this plan includes the following sections:

- Section 1:** Introduction: Overview of participants and planning process
- Section 2:** Plan Adoption: Information regarding the adoption of the plan by Monroe County and each participating jurisdiction.
- Section 3:** Planning Process: A description of the plan methodology and development process, committee and stakeholder roles and activities, and how the plan will be incorporated into existing programs.
- Section 4:** County Profile: An overview of Monroe County, including: (1) general information and physical conditions, (2) economy, (3) land use patterns and 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 Strategies: Information regarding the mitigation goals and objectives identified by the Steering Committee in response to priority hazards of concern, and the process by which County and local mitigation strategies have been developed or updated.
- Section 7:** Plan Maintenance Procedures: A system to continue to monitor, evaluate, maintain, and update the plan.

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 Monroe County and each participating jurisdiction containing their hazards of concern, hazard risk ranking, capability assessments, mitigation actions, action prioritization specific only to Monroe County or that jurisdiction, progress on prior mitigation activities (as applicable), and a discussion of prior local hazard mitigation plan integration into local planning processes.

Appendices include:

- Appendix A:** Sample Resolution of Plan Adoption: Documentation that supports the plan approval signatures included in Section 2 of this plan.
- Appendix B:** Meeting Documentation: Agendas, attendance sheets, minutes, and other documentation (as available and applicable) of planning meetings convened during the development of the plan.



- Appendix C:** 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 D:** Participation Matrix
- Appendix E:** Action Worksheet Template and Instructions
- Appendix F:** Plan Maintenance Tools: Examples of plan review templates available to support annual plan review and example FEMA Guidance Worksheets (FEMA 386-4).
- Appendix G:** Critical Facility Inventory
- Appendix H:** Risk Assessment Supplementary Data: Details regarding past hazard events since those documented in the 2023 plan.
- Appendix I:** NYS DHSES Planning Standards: Includes planning standards and guidelines for hazard mitigation planning.
- Appendix J:** Linkage Procedures
- Appendix K:** Dam Supplement: This appendix contains information on high hazard dams within Monroe County. Due to the sensitive nature of this information, details of the facilities have been redacted for the public document.