

SECTION 1: INTRODUCTION

BACKGROUND

In response to the requirements of the Disaster Mitigation Act of 2000 (DMA 2000), Greene County, and the towns and villages located in the County have developed this All-Hazard Mitigation Plan (HMP). 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 HMPs. The New York State Emergency Management Office (NYSEMO) also supports plan development for jurisdictions in New York State.

Specifically, DMA 2000 requires that States with support from local governmental agencies develop HMPs 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 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.

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.

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 would encourage communities to first assess their vulnerability to various disasters and then 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, such as the time lost from productive activity by business and industries, are minimized.

The *Federal Emergency Management Agency* (FEMA) estimates that for every dollar spent on damage prevention (mitigation), twice that amount is saved through avoided post-disaster damage repair.

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). 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 a 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 York, specifically to NYSEMO. FEMA also provides support through guidance, resources, and plan reviews. Copies of the applicable federal and state regulations are found in Appendix A.

ORGANIZATIONS INVOLVED IN THE MITIGATION PLANNING EFFORT

Greene 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 and in the Jurisdictional Annexes in Volume II, Section 9.

In addition to Greene County, all jurisdictions within the County have participated in the planning process (Table 1-1 and Figure 1-1) including the Homeowner's Association of Sleepy Hollow Lake LLC, and the Batavia Kill Watershed district (by proxy-see Appendix K).

Table 1-1. Participating Jurisdictions in Greene County

Jurisdiction	
Town of Ashland	Town of Lexington
Town of Athens	Town of New Baltimore
Town of Cairo	Town of Prattsville
Town of Catskill	Town of Windham
Town of Coxsackie	Village of Athens
Town of Durham	Village of Catskill
Town of Greenville	Village of Coxsackie
Town of Halcott	Village of Hunter
Town of Hunter	Village of Tannersville
Town of Jewett	Sleepy Hollow Lake

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, NYSEMO is the lead agency providing hazard mitigation planning assistance to local jurisdictions. NYSEMO provides guidance to support mitigation planning. In addition, FEMA provides grants, tools, 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). Oversight for the preparation of this plan was provided by the Greene County All Hazard Planning Committee (Planning Committee), which includes representatives from:

- County Legislature
- Department of Public Works
- Department of Economic Development, Tourism & Planning

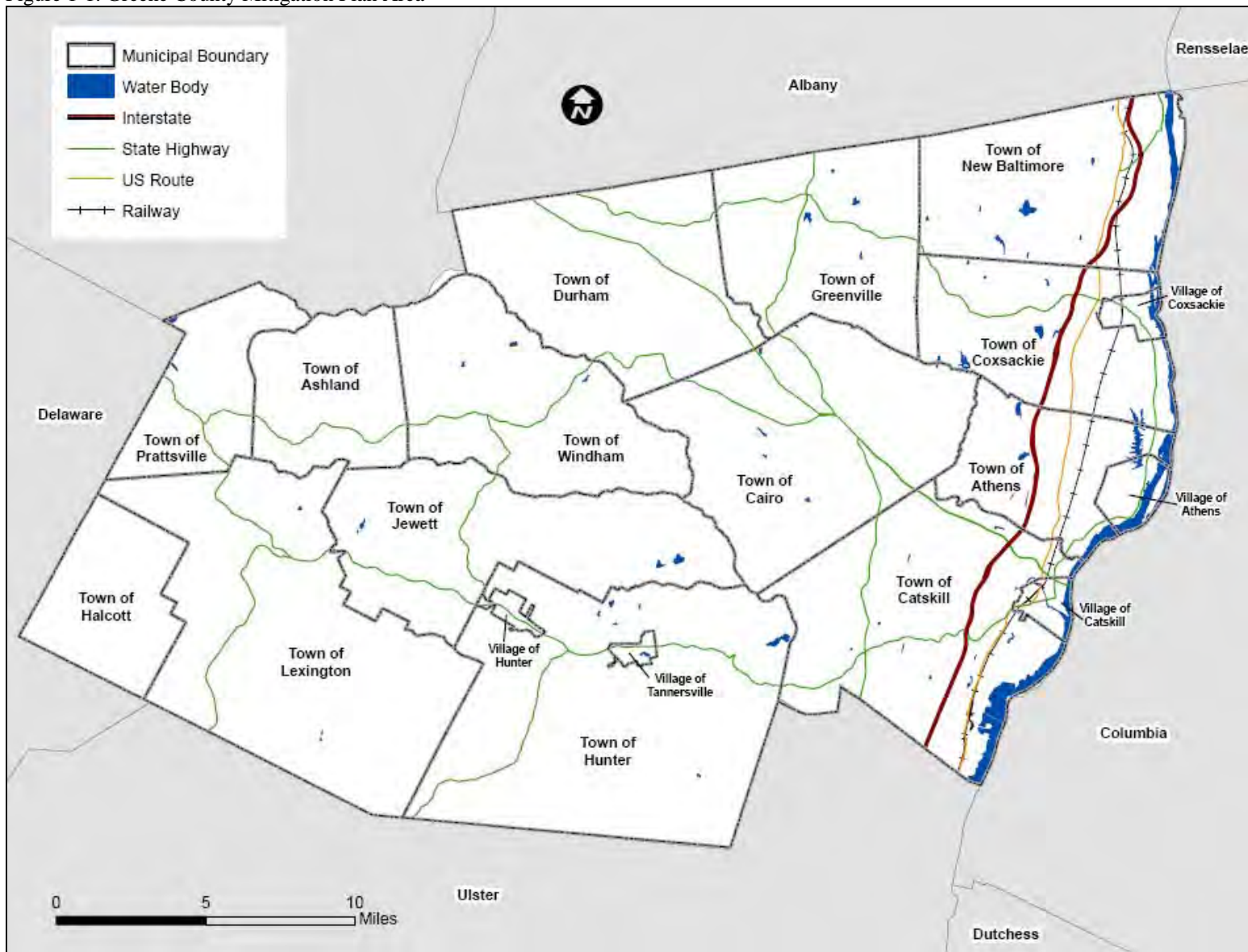
- Fire and EMS
- Information Technology
- Public Health
- Soil and Water Conservation District
- Highway Department
- NYC Department of Environmental Protection
- Catskill Watershed Corporation
- Land Trust
- American Red Cross
- Resort Owners
- Local Departments
- Residents

The Steering Committee is a subset of the Planning Committee and has been formed as a leadership group to plan, guide, expedite, and implement the planning process. The Steering Committee has provided guidance and leadership, overseen the planning process, and has acted as the point of contact for all partners and the various interest groups in the planning area.

The Planning Committee is comprised of the Steering Committee as well as additional county representatives and the remaining participating jurisdictional representatives. A list of Steering Committee and Planning Committee members is provided in Section 3: Planning Process.

Throughout the planning process, Greene County utilized the services of Tetra Tech EM, Inc. (Tetra Tech) in the capacity of consultant to provide assistance in preparation of the HMP. Tetra Tech was present and participated in meetings as noted in Section 3: Planning Process. Tetra Tech developed the plan, supported the identification of goals and objectives, reviewed and compiled hazard data, performed risk analyses, hazard identification and profiling, vulnerability analyses; supported the development of mitigation strategies, provided planning support, and authored the plan with input from Greene County.

Figure 1-1. Greene County Mitigation Plan Area



Source: Greene County Department of Economic Development and Planning



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

- 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. 2004. “How-To Guide for Using HAZUS-MH for Risk Assessment.” FEMA Document No. 433. February.
- FEMA Mitigation Planning How-to Series (FEMA 386-1 through 4, 2002), available at: <http://www.fema.gov/fima/planhowto.shtm>.

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 Crosswalk

FEMA Local Mitigation Plan Review Crosswalk	
Plan Criteria	Primary Location in Plan
Prerequisites	
Adoption by the Local Governing Body: §201.6(c)(5)	Volume I, Section 2.0; Appendix B
Planning Process	
Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)	Volume I, Section 2.0
Risk Assessment	
Identifying Hazards: §201.6(c)(2)(i)	Volume I, Sections 5.2 and 5.3
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
Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)	Volume I, Section 5.4
Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)	Volume I, Section 4.0
Mitigation Strategy	
Local Hazard Mitigation Goals: §201.6(c)(3)(i)	Volume I, Section 6.0; Volume II, Section 9
Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)	Volume I, Section 6.0; Volume II, Section 9
Implementation of Mitigation Actions: §201.6(c)(3)(iii)	Volume I, Section 6.0; Volume II, Section 9
Multi-Jurisdictional Mitigation Actions: : §201.6(c)(3)(iv)	Volume I, Section 6.0; Volume II, Section 9
Plan Maintenance Process	
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
Continued Public Involvement: §201.6(c)(4)(iii)	Volume I, Section 7.0

IMPLEMENTATION OF THE PLANNING PROCESS

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

- Developed a Planning Committee
- Identified hazards of concern
- Profiled these hazards
- Estimated the inventory at risk and potential losses associated with these hazards
- Developed mitigation goals and actions that address the various hazards that impact the area
- Developed mitigation plan maintenance procedures to be executed after obtaining approval of the plan from NYSEMO and FEMA

In May 2003, Greene County Emergency Management Office conducted a hazard analysis using the automated program, HAZNY (Hazards New York). HAZNY was developed by NYSEMO and the American Red Cross (ARC) to support consistent identification and ranking of hazards across the state. The analysis process asks specific questions about potential hazards in a community and records and evaluates the responses to these questions to prepare a preliminary score for each hazard. This score helps the community to develop an initial ranking of the priority of each hazard. Additional information on the results associated with HAZNY may be found in Appendix J.

Based on the HAZNY analysis, a hazards ID worksheet and ranking process, subsequent input from the Planning Committee, and review of other available data, the planning process then proceeded to identify, rank and profile those hazards that are of greatest concern to the community (hazards of concern). The hazard profiles include location, extent, previous occurrences and losses, and the probability of future events. The process also included a vulnerability assessment to evaluate what County, town and village assets are exposed or vulnerable to the hazards.

To address the requirements of DMA 2000 and better understand their potential vulnerability to and losses associated with hazards of concern, Hazards U.S. – Multi-Hazard (HAZUS-MH) software package (discussed in greater detail later in this Plan) supplemented by local data, as feasible, was used to support the risk assessment and vulnerability evaluation. HAZUS-MH assesses risk and estimates potential losses for natural hazards. It produces outputs that will assist state and local governments, communities, and the private sector in implementing emergency response, recovery, and mitigation programs, including the development of HMPs.

As required by DMA 2000, Greene 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 Multi-Jurisdictional Hazard Mitigation Plan documents the process and outcomes of the County and jurisdictions' efforts. Additional information on the planning 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.

BENEFITS OF MITIGATION PLANNING

The planning process will help prepare citizens and government agencies to better respond when disasters occur. Also, mitigation planning allows Greene County and town 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 include:

- An increased understanding of hazards faced by 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 and reduced repair costs

ORGANIZATION OF THIS MITIGATION PLAN

This Plan was organized in accordance with FEMA and NYSEMO guidance. The structure of this Plan follows the four-phase planning process recommended by FEMA and summarized in Figure 1-2. The Plan is organized into two volumes: Volume I includes all information that applies to the entire planning area (Greene County); and Volume II includes participating jurisdiction-specific information.

Volume I of this Plan includes the following sections:

Section 2: Plan Adoption: Information regarding the adoption of the Plan by Greene County and each participating jurisdiction.

Section 3: Multi-Jurisdictional Planning Process: A description of the Plan methodology and development process, Planning Committee and stakeholder involvement efforts, and a description of how this Plan will be incorporated into existing programs.

Section 4: County Profile: An overview of Greene 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 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 Greene County in response to priority hazards of concern.

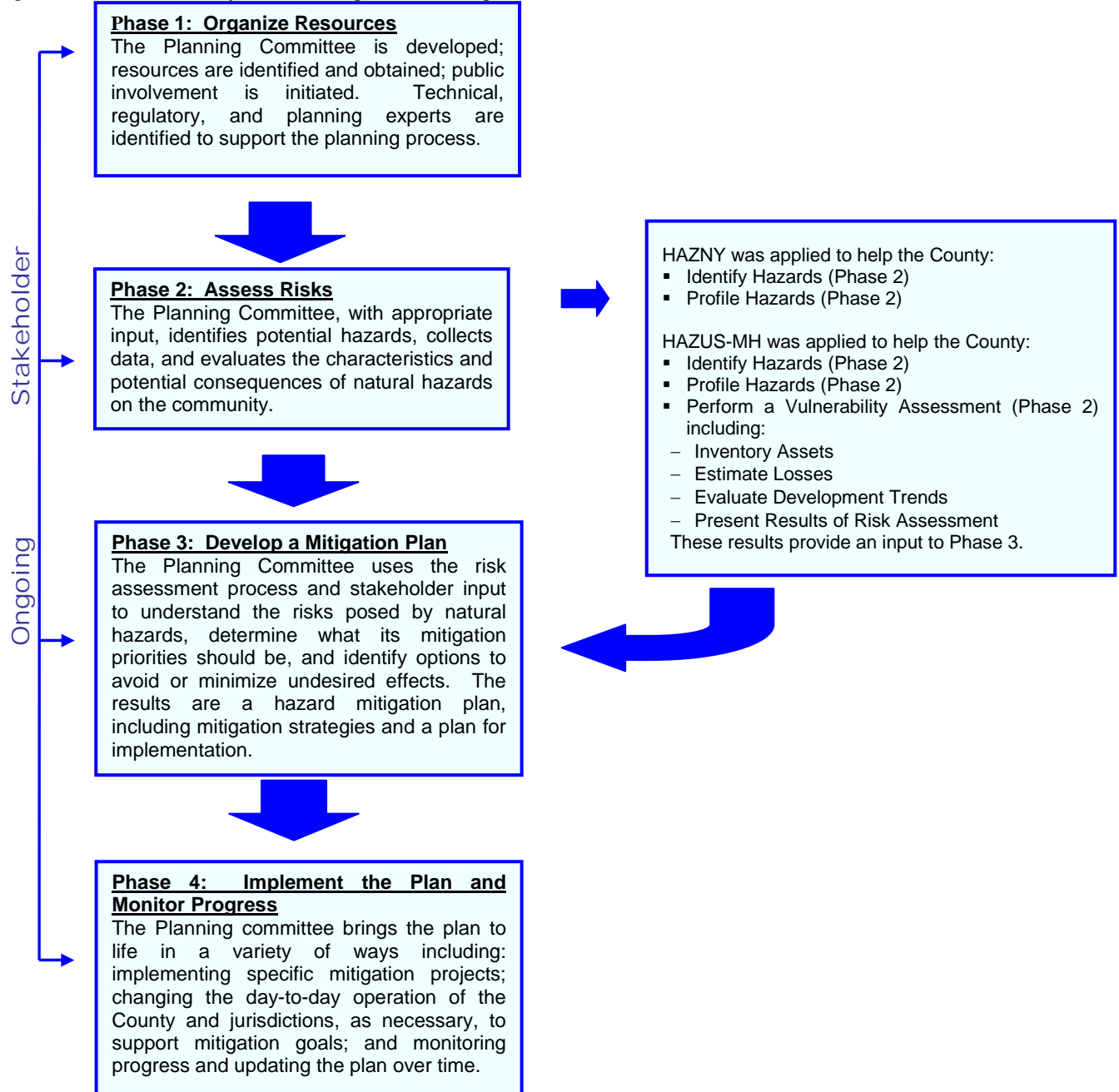
Section 7: Plan Maintenance Procedures: The system established by Greene County to monitor, evaluate, maintain and update the Plan.

Volume II of this Plan includes the following sections:

Section 8: Planning Partnership: Description of the planning partnership, jurisdictional annexes and benefit /cost review process.

Section 9: Jurisdictional Annexes: A jurisdiction-specific annex for each participating jurisdiction and the County containing their hazards of concern, risk ranking, capability assessments, mitigation actions and action prioritization specific only to the County or that jurisdiction.

Figure 1-2. Greene County Hazard Mitigation Planning Process



Appendices –

Appendix A: Applicable Federal and State Regulations: Copies of federal and state acts and regulations that apply to hazard mitigation planning within this jurisdiction.

Appendix B: Resolution of Plan Adoption: documentation that supports the Plan approval signatures included in Section 2 of this Plan.

Appendix C: Public and Stakeholder Outreach and Comments: Results of Public Survey Public Notices, Public Service Announcements, various newspaper articles to inform the public of the hazard mitigation planning effort in Greene County and specific public and stakeholder comments received throughout the planning process.

Appendix D: Mitigation Catalog: Comprehensive list of mitigation actions considered by Greene County and the participating jurisdictions.

Appendix E: Federal Mitigation Programs, Activities, and Initiatives: Summary of federal funding options that could be used to fund mitigation activities.

Appendix F: Jurisdictional Annex Template and Instructions: Template and instructions used by Greene County and each participating jurisdiction.

Appendix G: FEMA 386-4 Guidance Worksheets

Appendix H: Linkage Procedures

Appendix I: Minutes of Meetings

Appendix J: HAZNY: Summary of results of the Hazards New York analysis.

Appendix K: Batavia Kill Water District Proxy Letter