

Section 1

Introduction

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1.1 Overview

On October 30, 2000, the President signed into law the Disaster Mitigation Act of 2000, also known as DMA 2000. Among its other features, DMA 2000 established a requirement that in order to remain eligible for federal disaster assistance and grant funds, local and state governments must develop and adopt hazard mitigation plans. On February 26, 2002, the Federal Emergency Management Agency (FEMA) published an Interim Final Rule (IFR) that set forth the guidance and regulations under which such plans are supposed to be developed. The IFR provides detailed descriptions of both the planning process that states and localities are required to observe and the contents of the plan that emerges. This document, the Sussex County, New Jersey All-Hazards Pre-Disaster Mitigation Plan (the Plan), responds to those requirements.

Hazard mitigation is often defined as actions taken to reduce the effects of natural hazards on a place and its population. Sussex County decided to develop this Plan because of increasing awareness that natural hazards, especially flood and wind, have the potential to affect people, physical assets, and operations in Sussex County.

Contact information for the Sussex County official submitting this Plan is:

Eskil Danielson, MA CEM, Sussex County Division of Emergency Management
Director
Sussex County Sheriff's Office, Division of Emergency Management
39 High Street
Newton, New Jersey, 07860
973-579-0380

The purpose of a mitigation plan is to rationalize the process of determining appropriate hazard mitigation actions. This document includes a detailed characterization of natural hazards in Sussex County; a risk assessment that describes potential losses to physical assets, people, and operations; a set of goals, objectives, strategies, and actions that will guide Sussex County mitigation activities; and a detailed plan for implementing and monitoring the Plan.

This Plan focuses on six countywide hazards with the highest potential for damaging physical assets, people, and operations in Sussex County. These hazards are dam failure, earthquake, flood, high wind – straight line, severe weather – winter, and wildfire. Both the risk assessment and mitigation action plan sections reflect this emphasis, which was the result of careful consideration and a numerical ranking process carried out by the Sussex County Hazard Mitigation Working Group (HMWG).

1.2 Organization of the Plan

The Plan is organized to parallel the structure provided in the IFR. The Plan has seven sections.

Section 1	Introduction
Section 2	Planning Process
Section 3	Hazard Identification, Profiling and Prioritization
Section 4	Risk Assessment
Section 5	Capability Assessment
Section 6	Mitigation Action Plan
Section 7	Plan Monitoring and Maintenance
Appendices	

There are references to the IFR throughout the Plan. Where possible, these provide specific section and subsection notations to aid the review process. The Plan also includes references to the FEMA crosswalk document, which is used in reviewing mitigation plans.

1.3 Hazards and Risks

1.3.1 Hazards

Sections 3 and 4 of this Plan include detailed descriptions of the process that was used to assess and prioritize Sussex County's risks from natural hazards, quantitative risk assessments for the Sussex County as a whole, and more detailed assessments for certain asset classes. Eleven hazards were initially identified and profiled by the HMWG. These are:

- Dam Failure
- Drought
- Earthquake/Geological
- Flood
- Hazardous Materials Release
- High Wind–Straight-Line Winds
- High Wind–Tornado
- Landslide (non-seismic)
- Severe Weather-Summer
- Severe Weather-Winter
- Wildfire

For each of these hazards, the profiles in Section 3 include:

- Description of the Hazard
- Occurrence and Future Probability of Hazard
- Location and Extent of Hazard
- Severity
- Impact on Life and Property of the Hazard
- Prioritization and Rationale of the Hazard

After these initial 11 hazards were profiled, the HMWG used an evaluation system called Calculated Priority Risk Index (CPRI) based upon previous event history and hazard definitions, combined with the hazard’s probability of future occurrence, magnitude or severity of the hazard’s impacts, warning time before an event occurs, and the duration of the event. The intent of this evaluation was to reduce the range of hazards to those with the most potential to impact Sussex County.

As a result of this evaluation, the HMWG determined that six hazards present the greatest risk to Sussex County and its residents; dam failure, earthquake, flood, high wind – straight line, severe weather – winter, and wildfire. These hazards were further examined to determine the extent of the risk and to help identify potential projects.

1.3.2 Risks

A risk calculation is a FEMA requirement and an important component of a hazard mitigation plan. Risk is a numerical indication of potential future damages. Although hazard events from winter weather to hurricanes all have potential to affect the Sussex County area, dam failure, earthquake, flood, high wind – straight line, severe weather – winter, and wildfire are clearly the most significant hazards.

The six countywide hazards were selected for much more detailed assessments and estimations of future damages. Section 4 includes details about calculation methodologies and results of the countywide risk assessment and the results represented in Table 1.3.2-1.

Table 1.3.2-1: Summary of Countywide Hazard Risks in Sussex County

Hazard	Annualized Losses	Represents
Dam Failure	N/A	-
Earthquake/Geological	\$500,000	Economic - Total Property Damage (Capital Stock Losses) & Business Interruption Losses
Flood	\$36,790,000	Economic – Property, Contents, & Inventory (Capital Stock Losses) & Business Interruption Losses
High Wind – Straight Line	\$551,000	Economic - Total Property Damage (Capital Stock Losses) & Business Interruption Losses
Severe Weather – Winter	\$127,119 (\$2,204,541)	Estimated Average Annual Damages (includes deaths and injuries)
Wildfire	N/A	-

Notes:

- (1) Due to a lack of data for historic losses, Annualized Losses for Dam Failure and Wildfire cannot be calculated on a reliable basis. See Sections 4.3.1 and 4.3.6 respectively for discussion of risk due to Dam Failure and Wildfire.
- (2) This information is intended for planning purposes only. When conducting comparisons, be sure to use the same type of losses; for example do not use severe winter weather's value that includes deaths and injuries in comparison to flood's total property damage or you will not get an accurate portrayal.

1.4 Goals, Objectives, and Actions

Section 6 of this Plan describes Sussex County's priorities for mitigation actions. The section divides the actions by priority, and describes the funding required, sources of funding, the level of support, and the timing of the action. This section also includes Sussex County's hazard mitigation goals and objectives.

1.4.1 Sussex County Hazard Mitigation Goals

Goals are general guidelines that explain what Sussex County wants to achieve. Goals are expressed as broad policy statements representing desired long-term results. Sussex County's mitigation planning goals include:

1. Improve education and outreach efforts regarding potential impacts of hazards and the identification of specific measures that can be taken to reduce their impact
2. Improve data collection, use, and sharing to reduce the impacts of hazards
3. Improve capabilities, coordination, and opportunities at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities
4. Pursue opportunities to mitigate repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs, and activities

Please refer to Sections 6.4 and 6.5 for more information on goals for the Sussex County All-Hazards Pre-Disaster Mitigation Plan.

1.4.2 Objectives

Objectives are well-defined intermediate points in the process of achieving goals. (*Objectives* are generally coterminous with *strategies*.) Sussex County's mitigation planning objectives include:

- Increase awareness of risks and understanding of the advantages of mitigation by the general public and by local government officials
- Increase local government official awareness regarding funding opportunities for mitigation
- Improve data available to the county and participating municipalities for use in future planning efforts
- Provide government officials and local practitioners with educational opportunities and information regarding best practices for hazard mitigation planning, project identification, and implementation
- Acquire and maintain detailed data regarding critical facilities such that these sites can be prioritized and risk-assessed for possible mitigation actions

- Continue support of hazard mitigation planning, project identification, and implementation at the municipal and county level
- Support increased participation in the National Flood Insurance Program Community Rating System
- Support increased integration of municipal/county hazard mitigation planning and floodplain management with effective municipal/county zoning regulation, subdivision regulation, and comprehensive planning
- Provide user-friendly hazard-data accessibility for mitigation and other planning efforts and for private citizens
- Provide direct support, where possible, to municipal mitigation programs
- Facilitate development and timely submittal of project applications meeting state and federal guidelines for funding of repetitive and severe repetitive loss properties and hardening/retrofitting infrastructure and critical facilities with highest vulnerability rankings
- Maintain and enhance local regulatory standards including full and effective building code enforcement, floodplain management, and other vulnerability-reducing regulations

Please refer to Sections 6.4 and 6.5 for more information on objectives for the Sussex County All-Hazards Pre-Disaster Mitigation Plan.

1.4.3 Actions

Action Items are the specific steps (projects, policies, and programs) that advance a given objective. They are highly focused, specific, and measurable. Sussex County’s mitigation actions include, but are not limited to:

- Acquisition of flood-prone properties in Byram Township.
- Dam armoring in Newton Town.
- Building hardening and retrofits to Green Township Municipal Building.
- Construction of stormwater retention basin in Andover Borough.
- Stream bank stabilization in Sparta Township.
- Flood warning and notification system in Montague Township.

The above list is intended to be illustrative of the overall action items, rather than an exhaustive list. Please refer to Section 6.5 for more information on municipality specific mitigation actions.

1.5 Planning Process

Section 2 provides details about the process that was used to develop this Plan. The process closely followed the guidance in the Federal Emergency Management Agency (FEMA) 386 series of planning guidance, which recommends a four-stage process for developing mitigation plans.

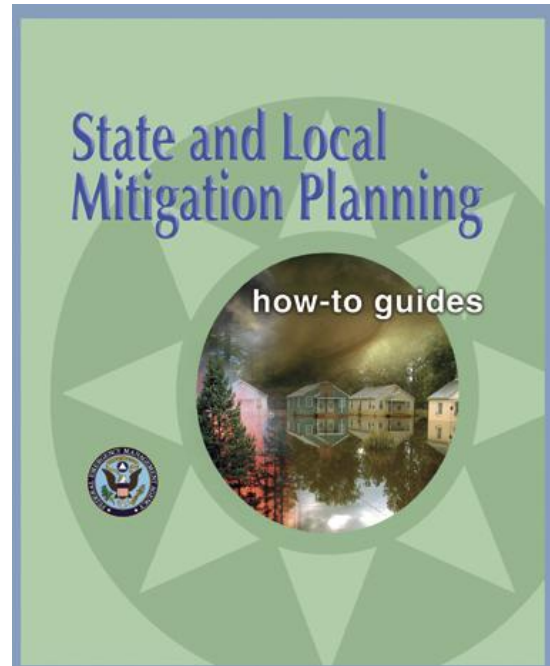
- Step 1: Organize resources
- Step 2: Assess risks
- Step 3: Develop a mitigation plan
- Step 4: Implement the plan and monitor progress

Step 1, organizing resources, is described in Section 2 (Planning Process). The section includes details about who was involved, the processes that were used to establish leadership and advisory groups, and public and other outreach and involvement efforts.

Step 2, assessing risks, was completed by the HMWG. The Risk Assessment is included as Section 4 of the Plan, and is preceded by Hazard Identification, Profiling and Prioritization in Section 3.

Step 3, development of the mitigation plan, is described in Section 2 (Planning Process) and Section 6 (Mitigation Action Plan). Section 2 includes details about who was involved, the processes that were used, and the products that were developed. Section 6 includes specific details about the identification and development of mitigation goals, objectives, and actions based upon Section 4 (Risk Assessment) and Section 5 (Capability Assessment).

Step 4, implementing the plan, is described in the Mitigation Action Plan in Section 6, which includes details about who is responsible for implementation of specific strategies and actions; and in Section 7, the Plan Monitoring and Maintenance section, which describes long-term implementation through periodic updates and reviews.



1.6 Adoption and Approval

1.6.1 Interim Final Rule Requirement for Adoption and Approval

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). For multi-jurisdictional plans, each jurisdiction requesting approval of the plan **must** document that it has been formally adopted.*

Requirement §201.6(a)(3): *Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process ... Statewide plans will not be accepted as multi-jurisdictional plans.*

1.6.2 Authority

In the State of New Jersey, counties are empowered to manage their own affairs via a governing body known as the Board of Chosen Freeholders. The following is an excerpt from the relevant portion of the New Jersey Statutes Annotated (NJS 40:20 et seq.)¹:

The property, finances, and affairs of every county shall be managed, controlled and governed by a board elected therein, to be known as "the board of chosen freeholders of the county of [Passaic] and the executive and legislative powers of the county shall be vested in that board of chosen freeholders, except where by law any specific powers or duties are imposed or vested in a Constitutional officer.

The board of chosen freeholders of any county which has created the office of county administrator, pursuant to the provisions of NJS 40A:9-42, may, by resolution, delegate to that office such executive and administrative powers, duties, functions, and responsibilities as the board may deem appropriate.

1.6.3 Adoption and Approval Procedure

[Note to Reviewers: The highlighted dates in Section 1.6.3 will be filled in after these events take place]

On [Insert DATE], the Federal Emergency Management Agency (FEMA) Region II determined that the Plan was "approvable pending adoption." On [Insert DATE], the Sussex County HMWG met and recommended that Sussex County and the participating municipalities should adopt the Plan. The Plan was submitted to the Sussex County Board of Chosen Freeholders as well as the appropriate entity for each participating municipality for review and adoption. The resulting Adoption Resolutions were then submitted to FEMA Region II for approval. FEMA subsequently issued formal approval letters to New Jersey Office of Emergency Management (NJOEM) for Sussex County and each participating municipality that adopted the Plan. NJOEM, in turn issued approval letters to the approved jurisdictions.

1.6.4 Participating Municipalities

The following 24 municipalities and institutions as well as Sussex County participated in the Plan by taking an active part in the planning process, identifying mitigation actions, and [will adopt] the Plan:

- Andover Borough
- Andover Township
- Branchville Borough
- Byram Township
- Frankford Township
- Franklin Borough
- Fredon Township
- Green Township
- Hamburg Borough

¹ New Jersey Office of the Attorney General.

- Hampton Township
- Hardyston Township
- Hopatcong Borough
- Lafayette Township
- Montague Township
- Newton Town
- Ogdensburg Borough
- Sandyston Township
- Sparta Township
- Stanhope Borough
- Stillwater Township
- Sussex Borough
- Vernon Township
- Walpack Township
- Wantage Township

To determine if municipal participation in the planning process was adequate for the purposes of this Plan and the FEMA plan review process, the following were established as minimum criteria

1. Attendance by a representative of each municipality at two (2) meetings where the development of the Plan was discussed;
2. Completion of portions of the capability assessment survey regarding the identify and participation of floodplain administrators, and the current status and update intervals for master plans, zoning plans and capital improvement plans;
3. Identification and documentation of at least two (2) mitigation actions for identified hazards; and
4. Adoption of the Plan after designation of the Plan as “approvable pending adoption” is received from NJOEM and FEMA.

1.6.5 Adoption Resolutions

Appendix E contains the signed Adoption Resolutions for Sussex County and the participating municipalities.

1.6.6 Approval Letters

Appendix F contains the formal Approval Letters for Sussex County and the participating municipalities.