



SECTION 6. MITIGATION STRATEGY

2016 HMP Update Changes

- For the 2016 HMP update, the mitigation strategy remains in Section 6.
- The goals and objectives were updated to align with the county and state’s current mitigation priorities.
- A Strength, Weakness, Obstacles and Opportunities (SWOO) exercise was conducted for Sussex County and summarized in this section.
- An NJOEM/FEMA Region II mitigation strategy workshop was conducted for Sussex County and all plan participants as summarized in this section.
- The 2011 HMP capability assessment section was presented in Section 5. For the 2016 HMP update, the capability assessment was expanded and presented in Section 6 (Volume I) and Section 9 (Volume II).
- The mitigation strategy evaluation and prioritization methodology was updated and expanded.

This section presents mitigation actions for Sussex County to reduce potential exposure and losses identified as concerns in the Risk Assessment portion of this HMP update. The county and planning partnership reviewed the risk assessment to identify and develop these mitigation actions, which are presented herein.

Hazard mitigation reduces the potential impacts of, and costs associated with, emergency and disaster-related events. Mitigation actions address a range of impacts, including impacts on the population, property, the economy, and the environment.

Mitigation actions can include activities such as: revisions to land-use planning, training and education, and structural and nonstructural safety measures.

This section includes:

- 1) Background and Past Mitigation Accomplishments
- 2) General Mitigation Planning Approach
- 3) Review and Update of Mitigation Goals and Objectives
- 4) Capability Assessment
- 5) Mitigation Strategy Development and Update

6.1 BACKGROUND AND PAST MITIGATION ACCOMPLISHMENTS

In accordance with the DMA 2000 requirements, a discussion regarding past mitigation activities and an overview of past efforts is provided as a foundation for understanding the mitigation goals, objectives, and activities outlined in this HMP. The county, through previous and ongoing hazard mitigation activities, has demonstrated that it is pro-active in protecting its physical assets and citizens against losses from natural and human-caused hazards of concern included in this plan. Examples of previous and ongoing actions, projects and capabilities include the following:

- The Sussex County Sheriff’s Office facilitated the development of the original 2011 Sussex County HMP. Four counties (Hunterdon, Mercer, Sussex and Warren Counties) worked together to develop their original HMPs. Each county had representation on the Northern Delaware River Region Steering Committee which met regularly throughout the planning process.
- For the 2016 HMP update, Sussex County led the planning process independent of the other three counties. The 2016 HMP update planning process is also being led by the Sussex County Sheriff’s Office DEM and includes participation of all 24 municipalities as well as Sussex County. This update represents the regulatory five-year local plan update process.



- All 24 municipalities in Sussex County participate in the National Flood Insurance Program (NFIP), which requires the adoption of FEMA floodplain mapping and certain minimum construction standards for building within the floodplain.
- Sussex County DEM is currently developing a regional rail emergency plan for hazardous materials in transit; a regional effort with Somerset, Hunterdon and Warren Counties.
- Sussex County DEM is developing a regional damage assessment plan; a regional effort with Somerset, Hunterdon, and Warren Counties.
- Sussex County DPW regularly conducts activities that reduce the county's risk to natural hazards including installing snow fencing; annually cleaning storm drains; and inspecting storm drains pre- and post-storm events.
- Municipalities have actively participated in available mitigation grant funding opportunities to implement mitigation projects, including the Hazard Mitigation Grant Program funding available in the wake of Tropical Storm Irene and Super Storm Sandy.
- The county and municipalities have implemented mitigation actions to protect critical facilities and infrastructure throughout the planning area.

These past and ongoing activities have contributed to the county's understanding of its hazard preparedness and future mitigation activity needs, costs, and benefits. These efforts provide an ongoing foundation for the planning partnership to use in developing this HMP update.

6.2 GENERAL MITIGATION PLANNING APPROACH

The overall approach used to update the county and local hazard mitigation strategies are based on FEMA and State of New Jersey regulations and guidance regarding local mitigation plan development, including:

- DMA 2000 regulations, specifically 44 CFR 201.6 (local mitigation planning)
- FEMA Local Mitigation Planning Handbook, March 2013
- FEMA Local Mitigation Plan Review Guide, October 1, 2011
- FEMA Integrating Hazard Mitigation into Local Planning, March 1, 2013
- FEMA Plan Integration: Linking Local Planning Efforts, July 2015
- FEMA Mitigation Planning How-To Guide #3, Identifying Mitigation Actions and Implementing Strategies (FEMA 386-3)
- FEMA Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards, January 2013

The mitigation strategy update approach includes the following steps that are further detailed in later sections of this section:

- Review and update mitigation goals and objectives.
- Identify mitigation capabilities, and evaluate their capacity and effectiveness to mitigate and manage hazard risk.
- Identify progress on previous county and local mitigation strategies.
- Develop updated county and local mitigation strategies.
- Prepare an implementation strategy, including the prioritization of projects and initiatives in the updated mitigation strategy.



6.3 REVIEW AND UPDATE OF MITIGATION GOALS AND OBJECTIVES

This section documents the efforts to update the hazard mitigation goals and objectives established to reduce or avoid long-term vulnerabilities to the identified hazards.

6.3.1 Goals and Objectives

According to 44 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.” Further, FEMA mitigation planning guidance recommends establishing objectives to better tie mitigation goals to specific mitigation strategies (e.g. projects, activities, and initiatives).

For the purposes of this HMP update, goals are defined as follows:

Goals are general guidelines that explain what is to be achieved. They are usually broad, long-term, policy-type statements and represent global visions. Goals help define the benefits the HMP is trying to achieve. The success of the HMP, once implemented, should be measured by the degree to which its goals have been met (that is, by the actual benefits in terms of hazard mitigation).

A goals and objectives meeting was held on April 15, 2015 to specifically review and receive input on the 2011 HMP goals and objectives. Consideration was given to the following criteria: (1) hazard events and losses since the 2011 HMP, (2) the updated hazard profiles and vulnerability assessment, (3) the goals and objectives established in the updated State of New Jersey HMP, (4) county and local risk management plans, as well as (5) direct input on how the Steering Committee (representing the county and participating municipalities) recognized the need to move forward to best manage their hazard risk.

Through facilitated discussion and brainstorming, it was decided to revise all of the 2011 HMP goals. In essence, the 2011 HMP goals remain as a part of the 2016 HMP updated goals and as a basis for new objectives; however the goals were broadened and new objectives were added to provide a more specific course of action to meet the goals.

The following are the updated goals for the 2016 Sussex County HMP update:

1. Protect life
2. Protect property
3. Increase public preparedness and awareness
4. Develop and maintain an understanding of risks from hazards
5. Enhance mitigation capabilities to reduce hazard vulnerabilities
6. Support continuity of operations pre-, during and post-hazard events

Sussex County HMP goals are compatible with the needs and goals expressed in other available community planning documents as well as the State of New Jersey HMP. Each goal has a number of corresponding objectives that further define the specific actions or implementation steps. Achievement of these goals will define the effectiveness of a mitigation strategy. The goals also are used to help establish priorities.

FEMA defines **Goals** as general guidelines that explain what should be achieved. Goals are usually broad, long-term, policy statements, and represent a global vision.

FEMA defines **Objectives** as strategies or implementation steps to attain mitigation goals. Unlike goals, objectives are specific and measurable, where feasible.

FEMA defines **Mitigation Actions** as specific actions that help to achieve the mitigation goals and objectives.





Objectives are short-term aims which, when combined, form a strategy or course of action to meet a goal. Unlike goals, objectives are specific and measurable. The objectives were developed by the Steering Committee through its knowledge of the local area, review of past efforts, findings of the risk assessment, qualitative evaluations, and identification of mitigation options. The objectives are used to (1) measure the success of the HMP once implemented, and (2) to help prioritize identified mitigation actions.

Table 6-1 presents Sussex County’s goals and objectives for the 2016 HMP update. Although several objectives are listed for each goal, the objectives were developed to meet multiple goals as demonstrated in Table 6-2.

Table 6-1. Goals and Objectives for the 2016 Hazard Mitigation Plan Update

Goal	Objective
Goal 1: Protect life	1.1: Identify the need for, and acquire, any special health and emergency services, training, and equipment to enhance response and recovery capabilities for specific hazards to vulnerable populations (<i>NEW</i>).
	1.2: Maintain and enhance local regulatory standards including full and effective building code enforcement, floodplain management and other vulnerability-reducing regulations (<i>2011 Objective 12</i>).
	1.3: Develop, enhance and protect early warning and emergency communications systems (<i>NEW</i>).
	1.4: Identify and train non-traditional first responders to increase response capabilities (<i>NEW</i>).
Goal 2: Protect property	2.1: Pursue cost-effective mitigation actions to reduce the impacts of hazards on people, property and the economy (<i>modified 2011 Goal 4, modified Objective 10</i>).
	2.2: Preserve, restore and enhance natural environmental resources including open space and agricultural resources that serve a natural hazard mitigation function (<i>NEW</i>).
	2.3: Facilitate the development and timely submittal of project applications meeting state and federal guidelines for funding to reduce the number of repetitive and severe repetitive loss properties and hardening/retrofitting infrastructure and critical facilities with identified needs (<i>2011 Goal 4, Objective 11</i>).
Goal 3: Increase preparedness and awareness (similar to 2011 Goal 1)	3.1: Increase awareness of hazard risks and understanding of the advantages of mitigation to the general public, business and community members, and by local government officials (<i>2011 Objective 1</i>).
	3.2: Increase local government official awareness regarding funding opportunities for mitigation (<i>2011 Objective 2</i>).
	3.3: Provide government officials and local practitioners with educational opportunities and information regarding best practices for hazard mitigation planning, project identification, and implementation (<i>2011 Objective 4</i>).
Goal 4: Develop and maintain an understanding of risks from hazards	4.1: Improve data collection and sharing; and increase data availability to the county and municipalities to reduce the impacts of hazards and for use in future planning efforts (<i>2011 Goal 2 and Objective 3</i>).
	4.2: Acquire and maintain detailed data regarding critical facilities and infrastructure such that these sites can be prioritized and risk-assessed for possible mitigation actions (<i>2011 Objective 5</i>).
	4.3: Continue support of hazard mitigation planning, project identification, and implementation at the municipal and county level (<i>2011 Objective 6</i>).
Goal 5: Enhance mitigation capabilities to reduce hazard vulnerabilities (similar to 2011 Goal 3 and Objective 6)	5.1: Support increased participation in the National Flood Insurance Program Community Rating System (<i>2011 Objective 7</i>).
	5.2: Support increased integration of municipal/county hazard mitigation planning and floodplain management with effective municipal zoning regulation, and effective municipal/county subdivision regulation, and comprehensive planning (<i>2011 Objective 8</i>).
	5.3: Provide user-friendly hazard-data accessibility for mitigation planning, other planning efforts and for private citizens (<i>2011 Objective 9</i>).





Table 6-1. Goals and Objectives for the 2016 Hazard Mitigation Plan Update

Goal	Objective
	5.4: Provide direct support, where possible, to municipal mitigation programs (2011 Objective 11).
Goal 6: Support continuity of operations pre-, during, and post- hazard events	6.1: Ensure continuity of operations of government, non-government, commerce, private sector, and infrastructure (NEW).
	6.2: Support and encourage the implementation of back-up and alternative energy sources (NEW).
	6.3: Develop, enhance and identify systems and procedures to help facilitate and prioritize an expedient response during disaster recovery efforts (NEW).

Note: After each objective, it is noted whether the objective is new to the 2016 HMP update, or references the original document.



Table 6-2. Sussex County Hazard Mitigation Plan Objectives

Obj. #	Objective Statement	Goal 1: Protect Life	Goal 2: Protect Property	Goal 3: Increase public preparedness and awareness	Goal 4: Develop and maintain an understanding of risks from hazards	Goal 5: Enhance county and local mitigation capabilities to reduce hazard vulnerabilities	Goal 6: Support continuity of operations pre-, during and post-hazard events
1.1	Identify the need for, and acquire, any special health and emergency services, training, and equipment to enhance response and recovery capabilities for specific hazards to vulnerable populations (NEW).	X			X	X	X
1.2	Maintain and enhance local regulatory standards including full and effective building code enforcement, floodplain management and other vulnerability-reducing regulations (2011 Objective 12).	X	X		X	X	X
1.3	Develop, enhance and protect early warning and emergency communications systems (NEW).	X		X		X	X
1.4	Identify and train non-traditional first responders to increase response capabilities (NEW).	X	X		X	X	X
2.1	Pursue cost-effective mitigation actions to reduce the impacts of hazards on people, property and the economy (modified 2011 Goal 4, modified Objective 10).	X	X				X
2.2	Preserve, restore and enhance natural environmental resources including open space and agricultural resources that serve a natural hazard mitigation function (NEW).	X	X			X	X
2.3	Facilitate the development and timely submittal of project applications meeting state and federal guidelines for funding to reduce the number of repetitive and severe repetitive loss properties and hardening/retrofitting infrastructure and critical facilities with identified needs (2011 Goal 4, Objective 11).	X	X			X	X
3.1	Increase awareness of hazard risks and understanding of the advantages of mitigation to the general public, business and community members, and by local government officials (2011 Objective 1).				X	X	
3.2	Increase local government official awareness regarding funding opportunities for mitigation (2011 Objective 2).				X	X	
3.3	Provide government officials and local practitioners with educational opportunities and information regarding best practices for hazard				X	X	X



Obj. #	Objective Statement	Goal 1: Protect Life	Goal 2: Protect Property	Goal 3: Increase public preparedness and awareness	Goal 4: Develop and maintain an understanding of risks from hazards	Goal 5: Enhance county and local mitigation capabilities to reduce hazard vulnerabilities	Goal 6: Support continuity of operations pre-, during and post-hazard events
	mitigation planning, project identification, and implementation (2011 Objective 4).						
4.1	Improve data collection and sharing; and increase data availability to the county and municipalities to reduce the impacts of hazards and for use in future planning efforts (2011 Goal 2 and Objective 3).				X	X	X
4.2	Acquire and maintain detailed data regarding critical facilities and infrastructure such that these sites can be prioritized and risk-assessed for possible mitigation actions (2011 Objective 5).				X	X	
4.3	Continue support of hazard mitigation planning, project identification, and implementation at the municipal and county level (2011 Objective 6).					X	
5.1	Support increased participation in the National Flood Insurance Program Community Rating System (2011 Objective 7).	X	X	X			
5.2	Support increased integration of municipal/county hazard mitigation planning and floodplain management with effective municipal zoning regulation, and effective municipal/county subdivision regulation, and comprehensive planning (2011 Objective 8).			X	X	X	
5.3	Provide user-friendly hazard-data accessibility for mitigation planning, other planning efforts and for private citizens (2011 Objective 9).				X	X	
5.4	Provide direct support, where possible, to municipal mitigation programs (2011 Objective 11).			X	X	X	
6.1	Ensure continuity of operations of government, non-government, commerce, private sector, and infrastructure (NEW).	X	X				X
6.2	Support and encourage the implementation of back-up and alternative energy sources (NEW).	X	X				X
6.3	Develop, enhance and identify systems and procedures to help facilitate and prioritize an expedient response during disaster recovery efforts (NEW).					X	X



6.4 CAPABILITY ASSESSMENT

According to FEMA 386-3, a capability assessment is an inventory of a community’s missions, programs and policies; and an analysis of its capacity to carry them out. This assessment is an integral part of the planning process. The assessment process enables identification, review and analysis of local and state programs, policies, regulations, funding and practices currently in place that may either facilitate or hinder mitigation.

For the 2016 HMP update, the county and all municipalities identified and assessed their capabilities in the areas of planning and regulatory, administrative and technical, and fiscal. By completing this assessment, the county and each municipality learned how or whether they would be able to implement certain mitigation actions by determining the following:

- Limitations that may exist on undertaking actions;
- The range of local and/or state administrative, programmatic, regulatory, financial and technical resources available to assist in implementing their mitigation actions;
- Action is currently outside the scope of capabilities;
- Types of mitigation actions that may be technically, legally (regulatory) administratively, politically or fiscally challenging or infeasible;
- Opportunities to enhance local capabilities to support long term mitigation and risk reduction.

During the 2016 HMP update process, all participating jurisdictions were tasked with developing their capability assessment, paying particular attention to evaluating the effectiveness of these capabilities in supporting hazard mitigation, and identifying opportunities to enhance local capabilities. The purpose of this section is to provide a summary of these capabilities for the purposes of mitigation and does not describe all responsibilities of each entity. The following subsections and tables present a summary of these assessments.

More detailed county and municipal capabilities in the areas of planning and regulatory, administrative and technical, and fiscal may be found in the Capability Assessment section of their jurisdictional annexes in Section 9. Further, within each annex participating jurisdictions have 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”). 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.

6.4.1 Planning and Regulatory Capability

According to the FEMA *Local Mitigation Handbook*, planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws and State statutes, and plans and programs that relate to guiding and managing growth and development. Sussex County and its municipalities have various federal, state, county and local policies, programs and plans available to promote and support mitigation and reduce future damages. Refer to Section 9 which summarizes the planning and regulatory capabilities per municipality.

Federal and State Regulatory Capability

State of New Jersey Hazard Mitigation Plan

The State of New Jersey HMP includes an evaluation of the state’s overall pre- and post-hazard mitigation policies, programs, and capabilities; the policies related to development in hazard-prone areas; and the state’s funding capabilities. The State of New Jersey HMP thoroughly describes the federal and state programs





available to Sussex County to promote mitigation. The State of New Jersey HMP (2014) was used as a resource in developing Sussex County’s HMP update.

National Flood Insurance Program (NFIP)

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968 (FEMA’s 2002 National Flood Insurance Program). The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

There are three components to the NFIP: flood insurance, floodplain management and flood hazard mapping. Communities participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in these communities. Community participation in the NFIP is voluntary. Flood insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Flood damage in the U.S. is reduced by nearly \$1 billion each year through communities implementing sound floodplain management requirements and property owners purchasing flood insurance. Additionally, buildings constructed in compliance with NFIP building standards suffer approximately 80% less damage annually than those not built in compliance (FEMA, 2008).

All jurisdictions in Sussex County participate in the NFIP. The effective Flood Insurance Rate Maps (FIRMs) for the county and all jurisdictions are dated September 2011. Further details on the county’s flood vulnerability may be found in the flood hazard profile in Section 5.4.4.

NFIP Community Rating System (CRS)

As an additional component of the NFIP, the Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance (FEMA, 2012).

Currently, there are no municipalities in the county participating in the CRS.

Critical Area Protection Policy

The following programs provide funding for the State of New Jersey, municipalities, and counties to purchase land for open-space preservation and recreation:

- Green Acres Program
- Blue Acres Program
- Historical Preservation Program
- Farmland Preservation
- Wetlands Act of 1970 (N.J.S.A. 13:9A)
- Soil and Erosion and Sediment Control Act (N.J.S.A. 4:24)
- Highlands Water Protection and Planning Act (N.J.S.A. 13:20-1)



The Wetlands Act of 1970 (N.J.S.A. 13:9A) provide rules and regulations governing development in wetland areas of New Jersey. New Jersey has 15 soil conservation districts, following county boundaries that implement the New Jersey Soil Erosion and Sediment Control Act (N.J.S.A. 4:24), which governs certain aspects of new development. The Highlands Act calls for a prohibition on development on steep slopes as defined in the act.

Land Use Planning Policy

The State of New Jersey Municipal Land Use Law (L.1975, c. 291, s. 1, eff. Aug. 1, 1976) is the legislative foundation for the land use process in the State of New Jersey, including decisions by Planning Boards and Zoning Boards of Adjustment. It defines the powers and responsibilities of boards and is essential to their functions and decisions. It also provides the required components of a municipal Master Plan.

Every municipal agency shall adopt and may amend reasonable rules and regulations, consistent with this act or with any applicable ordinance, for the administration of its functions, powers, and duties. These plans help jurisdictions review their land use plans and policies with public participation. The Municipal Land Use Law requires that each municipality prepare a comprehensive plan and update that plan every 10 years.

The county and all municipalities have master plans. The master plans were reviewed and consulted when developing the goals and objectives of the HMP update, as well as updating each community's mitigation strategy. The following summaries of various planning documents and reports relevant to managing land use and hazard risk within the county.

Regional, County and Local Planning and Regulatory Capability

Highlands Regional Master Plan (2008)

As noted in Section 4, Sussex County is partially located within the New Jersey Highlands Region. It is one of the seven counties protected by and subject to the provisions of the Highlands Water Protection and Planning Act.

The Highlands Regional Master Plan guides implementation of the Highlands Water Protection and Planning Act of 2004. The Act establishes a goal to protect, restore and enhance water quality and water quantity in the region, and includes the protection of agricultural viability, ecosystems, species and communities, and scenic and historic resources. The Highlands Regional Master Plan seeks to evaluate how to protect the natural and cultural resources of the Highlands Region while accommodating a sustainable economy. Overall, the Highlands Regional Master Plan provides a framework to base future land use decisions that fosters regional cooperation and community participation.

The Highlands Water Protection and Planning Act guides implementation of land use and development in the environmentally sensitive Highlands district, through the Highlands Regional Master Plan.

Sussex County Strategic Growth Plan Update (2014)

According to the Sussex County's Strategic Growth Plan Update, Sussex County faces several challenges regarding future economic growth and development. These challenges include a decline in population growth, especially the workforce of the future (ages 20 to 29 years); under-representation of higher-paying industries in the county; and limited transit services and public-use air facilities. A key asset to the county is its rural character in proximity to the urban core and the work that has been done to promote recreational and tourism potential in the county.



Six priority focus areas were identified to support and encourage future economic growth and development in the county: 1. Tourism; 2. Transportation; 3. Housing; 4. Economic development; 5. Reducing regulatory burden; 6. Agricultural development.

Sussex County Comprehensive Farmland Preservation Plan (2008)

According to the Sussex County Comprehensive Farmland Preservation Plan, the State Development and Redevelopment Plan designates most of Sussex County as Rural and Environmentally-sensitive lands, and encourages the clustering of development within defined centers in order to preserve the county's rural environment. In line with the 2003 Comprehensive Farmland Preservation Plan, the county's mission continues to include farmland preservation. The county has undertaken initiatives to promote the economic well-being of local farmers and has identified additional initiatives to promote the local agricultural industry.

Sussex County Ten-Year Mobility Study

The Sussex County Ten-Year Mobility Study presents steps that the county will need to take in order to address transportation challenges in the coming ten-year period. There are four strategies and associated projects identified to address congestion and traffic/transportation issues: 1. Smart Growth; 2. Transportation Demand Management; 3. Transit Option Development; and Traffic Operations and Roadway Management. The study stresses a smart growth approach to transportation management planning to accommodate future growth and facilitate the movement through the county's transportation network, and to ensure the county does not 'fall behind'.

Sussex County Open Space and Recreation Plan (2003)

To preserve the county's rich heritage of open space and to build on this legacy, county residents supported the establishment of the "Farmland, Recreation and Open Space Trust Fund." The County Board of Chosen Freeholders began to collect the tax in July 2001 at a rate approved by the voters. In March 2002, the Freeholders appointed an Open Space Advisory Committee to recommend properties and oversee a grant process that allocates the proceeds of the Trust to municipalities.

The Open Space program uses trust fund dollars to acquire land and/or water areas for the protection of ecologically sensitive areas; preservation of areas of scenic, cultural or historic value; public outdoor recreational facilities (active or passive); preservation of lands of exceptional flora or fauna; and for the protection of critical water supplies.

Projects are selected through an open and competitive process, governed by state and local statutes. Funds can only be used to purchase land in Sussex County from willing sellers on a voluntary basis. The county does not condemn property if the owner is unwilling to sell.

Floodplain Management Policy

New Jersey State Law Flood Hazard Area Control Act (NJSA 58:16A-52): The Act and regulations attempts to minimize damage to life and property from flooding caused by development within fluvial and tidal flood hazard areas, to preserve the quality of surface waters, and to protect the wildlife and vegetation that exist within and depend upon such areas for sustenance and habitat. While it does not require local adoption, as it is enforced by the NJDEP, the floodplain ordinances of each municipality need to be reviewed to be in compliance with this new regulation.

All municipalities participate in the NFIP and have a Floodplain Ordinance. Communities are encouraged to adopt standards which exceed NFIP requirements.



Building Codes Policy

Uniform Construction Code (Uniform Construction Code Act of 1975 [UCC]) requires all jurisdictions to have current land use master plans, zoning, and other land development ordinances. The UCC adopts up-to-date building codes as its Building Sub code and One- and Two-Family Sub code. These Sub codes contain requirements that address construction in both A and V flood zones.

Building codes mandate best practices and technology, much of which is designed to reduce or prevent damage from occurring when structures are under stress. New Jersey State Law requires that all municipalities adopt ordinances that follow the UCC. In January 2013, the State established by emergency rule the best available data from FEMA’s latest flood maps, plus one foot of freeboard, as the general rebuilding standard to adapt to changing flood hazard risks and corresponding federal flood insurance rates. All municipalities in Sussex County have an active building code.

Emergency Operations Plan

According to State Police Directive 101, each county and municipality shall prepare, adopt and maintain an Emergency Operation Plan that meets the requirements of the State Emergency Operations Plan guidelines and checklist. The plan describes the hazards faced by the jurisdiction as well as the jurisdictions capabilities, needs, demands and emergency management structure. Sussex County and each municipality have an Emergency Operations Plan.

6.4.2 Administrative and Technical Capabilities

According to the FEMA Local Mitigation Handbook, administrative and technical capability refers to a community’s staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively. Local mitigation is further supported by county, regional, state and federal administrative and technical capabilities.

The following summarizes the administrative and technical capabilities available in Sussex County. Based upon the capability assessment conducted, municipal administrative and technical capabilities vary across the county. Refer to Section 9 which describes each municipality’s administrative and technical capabilities.

Federal and State Administrative and Technical Capabilities

New Jersey State Police – Office of Emergency Management (NJOEM)

The Governor of New Jersey has the overall responsibility for emergency management activities in the state. The Superintendent of the New Jersey State Police is the State Director of the NJOEM. On behalf of the Governor, all activities and departments are coordinated, directed, and controlled from the NJOEM’s Emergency Operations Center.

The State Director of Emergency Management supervises, directs, and appoints deputies and/or assistants to control the daily activities of NJOEM. The function and staffing of NJOEM is with the approval of the Attorney General. The State Hazard Mitigation Officer is the representative of state government acting as the primary point of contact with FEMA, other federal agencies, and county and local units of government in the planning and implementation of pre- and post-disaster mitigation programs and activities required under the Stafford Act. Currently, the New Jersey State Hazard Mitigation Officer is Acting Sergeant First Class Michael Gallagher of NJOEM.



Recovery Bureau

The Chief of the Recovery Bureau supervises the Mitigation, Public Assistance, and Finance Units. The Mitigation Unit undertakes hazard mitigation planning and the review of mitigation projects in advance of potential disasters, and is also activated during and immediately after disasters to evaluate existing and proposed mitigation measures in the affected areas.

The Public Assistance Unit accepts and reviews applications for funds for emergency work submitted by local individuals, households, and businesses, as well as from local governments during and immediately after a disaster. The 2013 reorganization of the Recovery Bureau added a dedicated Finance Unit to support the fiscal functions of both the Public Assistance and Mitigation Units. The Finance Unit ensures timely reimbursements and fiduciary responsibility.

Mitigation Unit

The Mitigation Unit, within the Emergency Management Section, has the mission of enhancing state, county, and municipal risk reduction through the development and implementation of mitigation strategies. Hazard mitigation, by definition, is any sustained action that prevents or reduces the loss of property or human life from recurring hazards. The Mitigation Unit accomplishes this task by implementing and administering several grant-based programs in conjunction with FEMA.

Preparedness Bureau

The Preparedness Unit in the Preparedness Bureau is responsible for disseminating preparedness information in advance of a disaster or potential disaster. The Preparedness Unit maintains an extensive library of natural disaster preparedness and recovery information on its Family and Community Emergency Preparedness website, accessible at www.nj.gov/njoem or www.njsp.org/njoem. The disaster preparedness and recovery information featured prominently on the New Jersey State Police and NJOEM website home pages is a critical part of New Jersey's efforts to protect public health and safety and to minimize loss of life and property in the event of a disaster.

Hazard Mitigation Administrative Plan

In the event that an active disaster declaration has necessitated a FEMA-approved Hazard Mitigation Grant Program (HMGP) Administrative Plan, the plan is reviewed to ensure compliance with the prevailing guidance and to set forth the administrative procedures, organization, and requirements for administering the HMGP in New Jersey. The HMGP Administrative Plan is developed by the state and details the process for prioritizing post-disaster mitigation funding of local mitigation projects.

New Jersey Department of Environmental Protection

Bureau of Dam Safety & Flood Control

The Bureau of Dam Safety & Flood Control leads the state's efforts filling the State NFIP Coordinator position and providing Community Rating System (CRS) support. In addition, the section's responsibilities include the funding of construction and operation of federal, state, and local flood control mitigation projects throughout the state. The section has also taken a lead role on the development and adoption of NJ Flood Hazard Area mapping, as well as an active partnership with FEMA on their Map Modernization Program efforts. The bureau provides assistance to communities participating in the NFIP and interested in joining CRS thru the NJDEP Community Assistance Program Unit.



NJDEP Dam Safety Section

The NJDEP Dam Safety Section under the Bureau of Dam Safety & Flood Control has responsibility for overseeing dam safety in the state. In 1912, the New Jersey legislature passed a series of safety regulations related to the construction, repair, and inspection of existing and proposed dams in the state. In 1981, the law was amended and became the Safe Dam Act, N.J.S.A. 58:4. Eventually in 1985, the Dam Safety Standards, N.J.A.C. 7:20 regulations were passed leading to the Dam Safety Section.

The primary goal of the dam safety program is to ensure the safety and integrity of dams in New Jersey and, thereby, protect people and property from the consequences of dam failures. The section also coordinates with the Division of State Police, local and county emergency management officials in the preparations and approval of emergency action plans.

The Dam Safety Section reviews plans and specifications for the construction of new dams or for the alteration, repair, or removal of existing dams. The section must grant approval before the owner can proceed with construction. Engineers from the Dam Safety Section evaluate each project, investigate site conditions, and check recommended construction materials. During construction, engineers identify conditions that may require design changes, check for compliance with approved plans and specifications, and approve foundations before material is placed.

Existing dams are periodically inspected to assure that they are adequately maintained and owners are directed to correct any deficiencies found. The regulations require the owner to obtain a professional engineer to inspect their dams on a regular basis. These investigations include a comprehensive review of all pertinent material contained in the Section's files, a visual inspection, technical studies when necessary, and the preparation of a comprehensive report (NJDEP 2012a).

The owners or operators of all dams which raise the waters of any stream more than 70 feet above its usual mean low-water height or which impound more than 10,000 acre-feet of water shall have a regular inspection performed annually and formal inspections performed every three years by a New Jersey licensed professional engineer obtained by the owner. In addition, these inspections must be attended by a professional engineer assigned from the NJDEP.

Division of Water Supply and Geoscience

The Division of Water Supply and Geoscience (Water Supply) works to ensure adequate, reliable and safe water supply is available for the future. This goal is accomplished through the regulation of ground and surface water diversions, permitting of wells, permitting of drinking water infrastructure, monitoring of drinking water quality and technical support for water systems to achieve compliance with all federal and state standards. In addition, Water Supply staff act in a support role during an emergency situation to provide technical assistance, as needed to re-establish safe and adequate public water supplies.

Water Supply staff provides technical assistance to assist water systems during water supply emergencies and to address routine non-compliance from significant deficiencies or poor water quality test results. The Drinking Water State Revolving Fund (DWSRF) program assists water systems in financing the cost of infrastructure through the use of federal and New Jersey Infrastructure Trust funds. Additionally, Water Supply provides operator licensing and training support as well as financial assistance through the DWSRF program.

Water Resource Management

The Water Pollution Management Element is responsible for protecting New Jersey's surface and ground waters from pollution caused by improperly treated wastewater and its residuals. This is accomplished primarily through the implementation of the New Jersey Pollutant Discharge Elimination System (NJPDES) permit program. This



includes publicly owned treatment facilities (e.g. sanitary sewerage plants) and privately owned facilities (e.g. industrial facilities) as well as facilities that discharge stormwater (e.g. municipalities and highway agencies) and stormwater related to development. The NJPDES program also regulates discharges to ground water (e.g. septic systems) and the proper management of any residuals that are generated as part of the treatment process. The varied ownership of infrastructure components is often a complicating factor in the regulation of these entities (e.g. ownership of a treatment facility by a public entity and sewer mains by a different municipal entity). The total universe of NJPDES permits includes over 7,500 permits. The Water Pollution Management Element engineering and environmental specialist staff provide technical assistance in the development, interpretation and implementation of permit conditions.

New Jersey Department of the State - Office for Planning Advocacy (OPA) – Business Action Center

The New Jersey Office for Planning Advocacy (OPA) supports and coordinates planning throughout the state to protect the environment, mitigate development hazards and guide future growth into compact, mixed use development and redevelopment while fostering a robust long-term economy. The OPA implements the goals of the State Development and Redevelopment Plan to achieve comprehensive, long-term planning; and integrates that planning with programmatic and regulatory land use decisions at all levels of government and the private sector.

New Jersey Geological and Water Survey

The New Jersey Geological and Water Survey evaluates geologic, hydrogeologic and water quality data to manage and protect water resources, to identify natural hazards and contaminants, and to provide mineral resources including offshore sands for beach nourishment. Information provided by the survey includes GIS data and maps of geology, topography, groundwater and aquifer recharge. In addition the data tracks wellhead protection areas, aquifer thicknesses, properties and depths, groundwater quality, drought, geologic resources, and hazards such as earthquakes, abandoned mines, karst-influenced sinkholes and landslides.

Rutgers University

Office of the New Jersey's State Climatologist

The Office of the New Jersey's State Climatologist (ONJSC) generates and archives climate data. Generated data are from the New Jersey Weather and Climate Network (NJWxNet), which is an assemblage of 55 automated weather stations situated throughout the state. A decade or more of hourly observations are available from some of the stations, while others have shorter records. Since fall 2012 observations are available on a five-minute basis.

Along with these records, ONJSC archives or has ready access to National Weather Service (NWS) Cooperative Weather Station data. These are daily observations from several dozen stations at any given time over the past century. Individual stations have as many as 120 years of data while other stations have started or ceased operating since the late 1800s. Another source of generated data is the Community Collaborative Rain, Hail and Snow Network (CoCoRaHS), which includes daily observations of rain and snow from as many as several hundred volunteers throughout the state.

New Jersey Climate Adaptation Alliance

The New Jersey Climate Adaptation Alliance (NJADAPT) was formed in response to a diverse group of stakeholders who came together on November 29, 2011, at Rutgers University to participate in the conference "Preparing New Jersey for Climate Change: A Workshop for Decision-Makers".



The Alliance focuses on climate change preparedness for New Jersey in key impact sectors (public health; watersheds, rivers and coastal communities; built infrastructure; agriculture; and natural resources) through:

- Conducting outreach and education of the general public and targeted sectoral leaders
- Developing recommendations for state and local actions through collaboration with policymakers at the state, federal and local levels
- Undertaking demonstration and pilot projects in partnership with the private sector, local governments, non-governmental organizations, and others
- Identifying science, research and data needs
- Developing capacity for implementation of preparedness measures and documentation of best practices (Rutgers University 2014)

NJADAPT is a collaborative effort of scientists and data managers in academia, government, the private sector and non-governmental organization community who have developed a strategic plan for a New Jersey platform to host and apply climate science impacts and data. The NJADAPT website includes a flood exposure profile for community discussions about hazard impacts; NJ Flood Mapper (which is a tool for flooding hazards and sea level rise); and Getting to Resilience (a tool used to help communities reduce vulnerability and increase preparedness). NJADAPT can be accessed at <http://www.njadapt.org/>

Regional, County and Local Administrative and Technical Capabilities

Sussex County Sheriff's Office, Division of Emergency Management (DEM)

The Sussex County Sheriff's Office has the responsibility for a wide range of law enforcement services: Bureau of Corrections; Bureau of Law Enforcement; and Security of the County Court Complex.

The Sussex County DEM is a division of the Sheriff's Office. The Sussex County DEM is a county-level emergency service required by statute that coordinates resources to serve the needs of Sussex County during times of emergency events and disasters.

In carrying out its responsibilities, the DEM oversees the emergency management activities of all county agencies and Sussex County's 24 municipalities. Each municipality has an emergency management coordinator with whom this division interacts and the coordinators, in turn, interact at the local level with police, fire, EMS, public works, public health, schools, etc.

In addition to the foregoing, the DEM presents training and educational programs including personal emergency preparedness, access and functional needs and incident command for responders. The division also oversees two community alert programs, Swift911™ and Register Ready, that are of tremendous service to the public.

The Sussex County DEM is leading the HMP update. As mitigation grant funding becomes available, the Sussex County DEM distributes information to the municipal coordinators at quarterly meetings. The Sussex County DEM is leading the HMGP-Energy Allocation Initiative for the county.

Sussex County Planning Division

The Sussex County Division of Planning is responsible for providing staff and technical assistance to the County Planning Board, Agricultural Development Board, Solid Waste Advisory Committee, 208 Water Quality Policy Advisory Committee, Strategic Growth Advisory Committee and Board of Chosen Freeholders on all matters related to land use, development and conservation. The Division manages the following programs:



- Census data for the county
- Housing Market
- Cross Acceptance
- Development Review
- Economic Development
- Farmland Preservation
- Open Space Preservation
- Regional Planning
- Solid Waste Planning
- Transportation Planning
- Water Quality Management Planning
- Conferences and Presentations

Sussex County Planning Board

The Sussex County Planning Board is responsible for approving site plan and subdivision applications within their jurisdiction in accordance with the New Jersey County Planning Enabling Act. A Development Review Committee reviews all applications and acts on behalf of the full Board. Applications for waiver from County development standards are heard by the full Board with input from county engineering and planning staff.

Sussex County Department of Health and Environmental Services

The Sussex County Department of Health and Environmental Services' mission is to protect, promote, maintain and improve the health and quality of life for Sussex County citizens and visitors through a responsive, well managed and organized community effort. The Department has information on who to contact in times of emergency on their website (local radio stations, state and federal resources). The following are under the Department; some of which are described more fully below:

- Environmental Health
- Public Health Nursing
- Emergency Preparedness
- HAZ-MAT
- Special Child Health Services
- Weights and Measures
- Mosquito Control
- Health Education Topics
- Sussex-Warren Chronic Disease Coalition

Sussex County Public Health Emergency Preparedness Program

The Public Health Emergency Preparedness Program is dedicated to ensuring a coordinated, timely, and effective response to a bioterrorist event, natural disaster, or other public health emergency in Sussex County. On their website, there are numerous links and guides, in English and Spanish, to inform the public on emergencies and public health topics.

Sussex County HAZ-MAT Team

The Sussex county HAZ-MAT team, consists of 20+/- full time county employees trained to the technician level, available to respond to environmental and public health emergencies 24 hours a day, seven days a week.



A collaborative effort between the Sussex County Sheriff's Office, the Sussex County Office of the Prosecutor, the Sussex County Division of Public Works, and the Sussex County Department of Environmental and Public Health Services, the team was recognized by the State of New Jersey, Department of Environmental Protection as a Model Program for Hazardous Material Response. With the assistance of the County Office of Emergency Management and the Sussex County Public Safety Training Academy, the program has matured into a valuable asset and tool for the municipalities of Sussex County.

State of the art haz-mat equipment including response vehicles, air monitoring instruments, personal protective equipment, and decon units were all paid for through Homeland Security Grants received from the State and Federal Government with very little impact from county tax dollars.

Sussex County Community Health Partnership

The Sussex County Community Health Partnership (SCCHP) is committed to making a positive difference regarding the health concerns of the residents of Sussex County. The SCCHP is engaged in a community-wide strategic planning process to improve community health by prioritizing public health issues and identifying resource capacity to address health and quality of life issues using the Mobilizing for Action through Planning and Partnerships (MAPP) model.

Sussex County Division of Engineering

The Sussex County Division of Engineering is charged with overseeing the numerous facets associated with maintaining, improving, and monitoring the county's transportation network. The Division works closely with the Division of Facilities Management providing project support and civil/survey design services for a variety of facility related capital improvement projects. Additionally, the Division of Engineering provides technical support to the Division of Planning.

Included within the department's responsibilities are tasks such as in-house design of road and bridge improvement projects, management of multimillion dollar design projects, monitoring the condition of bridges; signals; signs; traffic markings and other similar infrastructure items, developing long term capital budgets, construction stakeout, ROW surveys, management of county road and bridge construction projects, track traffic trends, and monitor work within the county right of way through road opening and driveway permits.

Sussex County Office of Geographic Information System (GIS) Management

The Sussex County Office of Geographic Information Systems is within the Department of Central and Shared Services which provides mapping and GIS services to meet the business needs of county divisions, constitutional offices, local government and not-for-profit organizations within Sussex County. This includes providing support and maintenance in the areas of data conversion, cartography, computer graphics and visualization, Global Positioning Systems (GPS), database design and software development. As part of the 2016 HMP update, a county-wide critical facility inventory was developed and used to assess risk. The Office of GIS will maintain this dataset for the county.

Sussex County Economic Development Partnership

The Sussex County Economic Development Partnership, Inc. (SCEDP) is dedicated to the creation of sustainable economic opportunity and prosperity to improve the quality of life in Sussex County. The SCEDP will proactively facilitate the recruitment, retention and expansion of business that will complement, and be consistent with, the character and environment of Sussex County.



Rutgers Cooperative Extension of Sussex County

Rutgers Cooperative Extension is part of the Federal Land Grant University system serving as the educational outreach arm of the United States Department of Agriculture. Rutgers Cooperative Extension of Sussex County was established in 1912 and was the first Cooperative Extension program in New Jersey. The office provides research-based information to help Sussex County residents acquire knowledge to make informed decisions to maintain or improve their quality of life.

Educational programs are provided without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. Program delivery methods include: classes and conferences, telephone and in-person consultations, replies to emailed questions, newspaper columns, radio and television programs, bus trips, fairs and clubs, field meetings and demonstrations, computerized diet and financial analyses, videos, newsletters, fact sheets, speaking engagements for organizations and work sites, exhibits and displays, and web sites.

6.4.3 Fiscal Capabilities

Mitigation projects and initiatives are largely or entirely dependent on available funding. Sussex County and its municipalities are able to fund mitigation projects through existing local budgets, local appropriations (including referendums and bonding), and through a myriad of federal and state loan and grant programs. Additional information on funding sources may be found in the 2014 State of New Jersey HMP. The county currently accesses funding from the following sources for mitigation work:

- Federal and state funding programs
- Capital improvements project funding
- Authority to levy taxes for specific purposes
- Incur debt through general obligation funds and special tax bonds
- Open Space Trust Fund to acquire land or water areas
- Capital improvement plans/municipal budgets

Federal Hazard Mitigation Funding Opportunities

Federal mitigation grant funding is available to all communities with a current HMP (this plan); however most of these grants require a “local share”. In general, HMA funds may be used to pay up to 75 percent of the eligible activity costs. The remaining 25 percent of eligible activity costs are derived from non-federal sources. Exceptions to the 75 percent federal and 25 percent non-federal share are described below under the specific FEMA HMA grant programs. The FEMA mitigation grant programs are described below.

Hazard Mitigation Grant Program (HMGP)

The HMGP is a post-disaster mitigation program. It is made available to states by FEMA after each federal disaster declaration. The HMGP can provide up to 75 percent funding for hazard mitigation measures. The HMGP can be used to fund cost-effective projects that will protect public or private property in an area covered by a federal disaster declaration or that will reduce the likely damage from future disasters. Examples of projects include acquisition and demolition of structures in hazard-prone areas, flood-proofing or elevation to reduce future damage, minor structural improvements, and development of state or local standards. Projects must fit into an overall mitigation strategy for the area identified as part of a local planning effort. All applicants must have a FEMA-approved HMP (this plan).

Applicants who are eligible for the HMGP are state and local governments, certain nonprofit organizations or institutions that perform essential government services, and Native American tribes and authorized tribal



organizations. Individuals or homeowners cannot apply directly for the HMGP; a local government must apply on their behalf. Applications are submitted to NJOEM and placed in rank order for available funding and submitted to FEMA for final approval. Eligible projects not selected for funding are placed in an inactive status and may be considered as additional HMGP funding becomes available.

Flood Mitigation Assistance (FMA) Program

The FMA combines the previous Repetitive Flood Claims and Severe Repetitive Loss Grants into one grant program. FMA provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP. The FMA is funded annually; no federal disaster declaration is required. Only NFIP-insured homes and businesses are eligible for mitigation under this program. Funding for FMA is limited and, as with the HMGP, individuals cannot apply directly for the program. FEMA may contribute up to 100 percent federal cost share for SRL properties. FEMA may contribute up to 90 percent federal cost share for repetitive loss (RL) properties. Applications must come from local governments or other eligible organizations. FMA funds are distributed from FEMA to the state. NJOEM serves as the grantee and program administrator for FMA.

Pre-Disaster Mitigation (PDM) Program

The Pre-Disaster Mitigation (PDM) program is an annually funded, nationwide, competitive grant program. No disaster declaration is required. Federal funds will cover up to 75 percent of a project's cost. Small impoverished communities may be eligible for up to a 90 percent federal cost share. As with the HMGP and FMA, a FEMA-approved local HMP is required to be approved for funding under the PDM program.

Federal and State Disaster and Recovery Assistance Programs

Following a disaster, various types of assistance may be made available by local, state, and federal governments. The types and levels of disaster assistance depend on the severity of the damage and the declarations that result from the disaster event. The following subsections describe the general types of assistance that may be provided should the President of the United States declare the event a major disaster.

Individual Assistance (IA)

Individual Assistance (IA) provides help for homeowners, renters, businesses, and some non-profit entities after disasters occur. This program is largely funded by the U.S. Small Business Administration. For homeowners and renters, those who suffered uninsured or underinsured losses may be eligible for a Home Disaster Loan to repair or replace damaged real estate or personal property. Renters are eligible for loans to cover personal property losses. Individuals may borrow up to \$200,000 to repair or replace real estate, \$40,000 to cover losses to personal property and an additional 20 percent for mitigation. For businesses, loans may be made to repair or replace disaster damages to property owned by the business, including real estate, machinery and equipment, inventory and supplies. Businesses of any size are eligible. Non-profit organizations such as charities, churches, private and universities are also eligible. An Economic Injury Disaster Loan provides necessary working capital until normal operations resume after a physical disaster. These loans are restricted, by law, to small businesses only.

Public Assistance (PA)

Public Assistance (PA) provides cost reimbursement aid to local governments (state, county, local, municipal authorities, and school districts) and certain non-profit agencies that were involved in disaster response and recovery programs or that suffered loss or damage to facilities or property used to deliver government-like services. This program is largely funded by FEMA with both local and state matching contributions required.



Small-Business Administration (SBA) Loans

Small Business Administration (SBA) loans provides low-interest disaster loans to homeowners, renters, business of all sizes, and most private nonprofit organizations. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.

Homeowners may apply for up to \$200,000 to replace or repair their primary residence. Renters and homeowners may borrow up to \$40,000 to replace or repair personal property-such as clothing, furniture, cars, and appliances that have been damaged or destroyed in a disaster. Physical disaster loans of up to \$2 million are available to qualified businesses or most private nonprofit organizations.

Department of Homeland Security

The Homeland Security Grant Program (HSGP) plays an important role in the implementation of the National Preparedness System by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal of a secure and resilient nation. The HSGP supports core capabilities across the five mission area of Prevention, Protection, Mitigation, Response, and Recovery based on allowable cost. The HSGP is comprised of three interconnected grant programs including the State Homeland Security Program (SHSP), Urban Areas Security Initiative (UASI), and the Operation Stonegarden (OPSG). Together, these grant programs fund a range of preparedness activities, including planning, organization, equipment purchase, training, exercises, and management and administration.

Community Development Block Grants (CDBG)

Community Development Block Grants (CDBG) are federal funds intended to provide low- and moderate-income households with viable communities, including decent housing, as suitable living environment, and expanded economic opportunities. Eligible activities include community facilities and improvements, roads and infrastructure, housing rehabilitation and preservation, development activities, public services, economic development, planning, and administration. Public improvements may include flood and drainage improvements. In limited instances, and during the times of “urgent need” (e.g., post disaster) as defined by the CDBG National Objectives, CDBG funding may be used to acquire a property located in a floodplain that was severely damaged by a recent flood, demolish a structure severely damaged by an earthquake, or repair a public facility severely damaged by a hazard event.

Community Development Block Grants-Disaster Recovery (CDBG-DR)

The National Disaster Resilience Competition will make \$1 billion available to communities that have been struck by natural disasters in recent years. The competition will promote risk assessment and planning and will fund the implementation of innovative resilience projects to better prepare communities for future storms and other extreme events. Funding for the competition is from the Community Development Block Grants-Disaster Recovery (CDBG-DR) appropriation provided by the 2013 Disaster Relief Appropriations Act (PL 113-2).

Federal Highway Administration - Emergency Relief

The Federal Highway Administration Emergency Relief is a grant program that may be used for repair or reconstruction of federal-aid highways and roads on federal lands which have suffered serious damage as a result of a disaster.

Federal Transit Administration - Emergency Relief

The Federal Transit Authority Emergency Relief is a grant program that funds capital projects to protect, repair, reconstruct, or replace equipment and facilities of public transportation systems. Administered by the Federal



Transit Authority at the U.S. Department of Transportation and directly allocated to MTA and Port Authority, this transportation-specific fund was created as an alternative to FEMA PA.

Homeownership Repair and Rebuilding Fund

The Homeownership Repair and Rebuilding Fund provides grants up to an additional \$10,000 to eligible homeowners who have already qualified for FEMA housing assistance's maximum grant (\$31,900) and will not receive other assistance from private insurance or government agencies that would duplicate the grant's funding.

U.S. Economic Development Administration (USEDA)

The U.S. Economic Development Administration (USEDA) is an agency of the U.S. Department of Commerce that supports regional economic development in communities around the country. It provides funding to support comprehensive planning and makes strategic investments that foster employment creation and attract private investment in economically distressed areas of the United States. Through its Public Works Program, USEDA invests in key public infrastructure, such as in traditional public works projects, including water and sewer systems improvements, expansion of port and harbor facilities, brownfields, multitenant manufacturing and other facilities, business and industrial parks, business incubator facilities, redevelopment technology-based facilities, telecommunications and development facilities. Through its Economic Adjustment Program, USEDA administers its Revolving Loan Fund (RLF) Program, which supplies small businesses and entrepreneurs with the gap financing needed to start or expand their business in areas that have experienced or are under threat of serious structural damage to the underlying economic base.

New Jersey Environmental Infrastructure Trust (NJEIT)

The New Jersey Environmental Infrastructure Trust (NJEIT) is an independent state financing authority that provides low-interest rate loans to qualified borrowers in New Jersey for water quality and infrastructure projects. The NJEIT, partnering with NJDEP, offers short-term financing (bridge loans) and long-term disaster-recovery loan assistance.

New Jersey Economic Development Authority (NJEDA)

The New Jersey Economic Development Authority (NJEDA) is an independent state agency that provides tax incentives to foster development and employment growth and retention, financing for small and mid-sized businesses, revitalizes communities through redevelopment initiatives, and supports entrepreneurial development by providing access to training and mentoring programs. With its large portfolio of some 30 varied programs and services, NJEDA can assist businesses, non-profits and developers to access capital, including tax-exempt and taxable bond financing, loans, loan guarantees, and business and tax incentives.

New Jersey Redevelopment Authority (NJRA)

The New Jersey Redevelopment Authority (NJRA) is an independent state financing authority committed exclusively to the redevelopment of New Jersey's urban areas. NJRA offers several financing resources including site acquisition funding, predevelopment assistance, several development assistance resources, and technical assistance.

New Jersey Housing and Mortgage Finance Agency (NJHMFA)

The New Jersey Housing and Mortgage Finance Agency (NJHMFA) is an independent state financing authority that provides affordable home ownership and housing opportunities for New Jersey residents by funding affordable home mortgages for first-time home buyers, promoting construction and rehabilitation of rental housing, and encouraging mixed-income owner-occupied housing growth. NJHMFA provides low-interest



financing and administers low-income housing tax credits for the State of New Jersey’s low and moderate income communities.

New Jersey Department of Community Affairs (NJDCA)

The New Jersey Department of Community Affairs (NJDCA) is a state agency created to provide administrative guidance, financial support, and technical assistance to local governments, community development organizations, businesses, and individuals to improve the quality of life in New Jersey. NJDCA offers a wide range of programs, funding, and services that respond to issues of public concern including fire and building safety, housing production, community planning and development, and local government management and finance. Among other funding sources, NJDCA administers CDBG funding and is typically the CDBG-DR funding recipient for the State of New Jersey.

Regional, County and Local Funding Opportunities

Farmland Preservation, Recreation, and Open Space Trust Fund

The Farmland Preservation, Recreation, and Open Space Trust Fund is divided into two separate categories, each having its own distinct goals and objectives. The Farmland Preservation Program uses Trust Fund dollars to purchase development easements on farm land, forever protecting the agriculture use. The Open Space program uses Trust Fund dollars to acquire land and/or water areas for the protection of ecologically sensitive areas; preservation of areas of scenic, cultural or historic value; public outdoor recreational facilities (active or passive); preservation of lands of exceptional flora or fauna; and for the protection of critical water supplies.

The Trust Fund cannot be used for construction and development of mitigation projects and is strictly used to acquire open space.

Projects are selected through an open and competitive process, governed by state and local statutes. Funds can only be used to purchase land in Sussex County from willing sellers on a voluntary basis. The county does not condemn property if the owner is unwilling to sell.

In 2015, the residents of the county passed a ballot to renew the Trust Fund. The Trust Fund will continue to be funded through a property tax assessment determined annually by the Board of Chosen Freeholders.

Capital Improvement Plans

Capital improvement plans outline capital spending and investments necessary for public improvements. Many municipalities in Sussex County have capital improvement plans. These plans and budgets have been and may continue to be used to fund mitigation projects and demonstrate integration into daily operations. Refer to Section 9 for further details.

Highlands Water Protection and Planning Council

The Highlands Council informed Sussex County through their review of the draft HMP update, that they may be able to offer constituent municipalities in the Highlands Region funding regarding disaster debris management planning. The NJDEP released a “Disaster Debris Management Planning Tool Kit for New Jersey Municipalities”. The Highlands Council noted this tool kit is offered as a technical assistance for constituent municipalities.



6.5 MITIGATION STRATEGY DEVELOPMENT AND UPDATE

As required by FEMA, the county and participating municipalities completed a comprehensive evaluation of the mitigation strategies and actions from the 2011 HMP and reported on the status of each. Their update may be found in each jurisdictional annex (Section 9). In addition, the county and participating municipalities were provided the opportunity to include new strategies or actions to include in the 2016 HMP update. New actions were prioritized to ensure they are cost-effective, environmentally sound, and technically feasible using the methodology outlined below.

6.5.1 Strengths, Weaknesses, Opportunities, and Obstacles (SWOO)

In April 2015, a Strengths, Weaknesses, Opportunities, and Obstacles (SWOO) session was held with the Planning Committee. The purpose of this session was to identify strengths, weaknesses, opportunities and obstacles in hazard mitigation within Sussex County through a facilitated brainstorming session on risks, vulnerabilities, and capabilities. All information shared during this session was recorded and used to prepare catalogs of mitigation alternatives to be used by the Planning Committee in preparing their individual jurisdictional annexes. Many of the strategies (such as community outreach) identified in the catalogs could be applied to multiple hazards. This 2016 HMP update identifies strategies for multiple hazards for Sussex County and each jurisdictional annex for participating jurisdictions (Section 9).

Catalog of Mitigation Actions

Based on information gathered during the SWOO session, the Planning Committee and planning consultant generated a mitigation catalog which includes a comprehensive list of mitigation actions that could manipulate the hazard, reduce exposure to the hazard, reduce vulnerability to the hazard, and to increase the ability to respond to or be prepared for a hazard for Sussex County (Appendix F). The catalog was generated to meet the following objectives:

- Use information obtained from the public involvement strategy
- Use information provided in the risk assessment
- Seek mitigation actions consistent with the goals and objectives for the Sussex County HMP update
- Create catalogs of mitigation actions to be used as a tool by the Planning Committee in selection of mitigation actions

In addition, the catalog indicates responsibility for implementation (i.e., who would most likely implement the initiative: personal property owners, private sector business, or government). Based on the risk assessment, the hazards included in the catalog are deemed to be those to which the planning area is most vulnerable.

The catalog is not meant to be exhaustive or site-specific but rather to inspire thought and provide members of the Planning Committee a baseline of initiatives backed by a planning process, consistent with the goals and objectives of the planning area, and within the capabilities of the participants. The Planning Committee was not bound to these actions. They had the opportunity to add further actions subsequent to the SWOO workshops. Actions in the catalog that were not selected by the partners to include in their jurisdictional annexes were not selected based on the following:

- Action is currently outside the scope of capabilities (funding)
- The jurisdiction is not vulnerable to the hazard
- Action is already being implemented



All proposed mitigation actions were identified in relation to the goals and objectives presented above. The mitigation actions include a range of options in line with the four types of mitigation actions described in FEMA guidance (FEMA's *Local Mitigation Planning Handbook* March 2013).

6.5.2 Update of Municipal Mitigation Strategies

To evaluate progress on local mitigation actions, each municipality was tasked to review and provide the status of their local mitigation strategy in the 2011 FEMA-approved Sussex County HMP, via a Mitigation Action Plan Review Worksheet. Each worksheet was pre-populated with those actions identified for their jurisdiction in the prior plan. For each action, municipalities that participated in the 2011 HMP were asked to indicate the status of each action ("No Progress/Unknown," "In Progress/Not Yet Complete," "Continuous," "Completed," "Discontinued"), and provide review comments on each. Municipalities were requested to quantify the extent of progress, and provide reasons for the level progress or why actions were discontinued. Each jurisdictional annex provides a table identifying their prior mitigation strategy, the status of those actions and initiatives, and their disposition within their updated strategy.

Local mitigation actions identified as "Complete" and those actions identified as "Discontinued," have been removed from the updated strategies. Those local actions that municipalities identified as "No Progress/Unknown," "In Progress/Not Yet Complete," as well as certain actions/initiatives identified as "Continuous," have been carried forward in their local updated mitigation strategies, if still deemed appropriate and a priority. Municipalities were asked to provide further details on these projects to help better define the projects, identify benefits and costs, and improve implementation.

Certain continuous or ongoing strategies represent programs that are, or since the 2011 HMP have become, fully integrated into the normal operational and administrative framework of the community. Such programs and initiatives have been identified within the Capabilities section of each annex, and removed from the updated mitigation strategy.

Sussex County hosted and participated in a mitigation action workshop in April 2015 and was provided the Sussex County hazard mitigation catalog (Appendix F) as well as the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

In addition, the Steering Committee and planning consultant held one-on-one meetings with municipalities, or assisted via conference call to support mitigation strategy development (refer to Table 3-3 in Section 3). The goals of these workshops and meetings were to: (1) evaluate progress on previously identified mitigation actions from the 2011 HMP; (2) review and evaluate a comprehensive range of mitigation strategies for consideration; (3) provide the tools and guide the municipalities on identifying and prioritizing selected mitigation actions; and (4) discuss integration of mitigation activities into daily operations. All municipalities attended these small-scale workshops which began the development of their jurisdictional annexes.

All participating municipalities were provided capture tools (Mitigation Action Worksheets) to further assist in assessing the risk, evaluating potential actions/projects (qualitative alternatives analysis), and identifying new actions for implementation.

The county and municipalities identified projects that have been submitted to NJOEM for grant funding, including projects for which Letters of Intent (LOI) and grant applications have been submitted under the Hurricane Sandy HMGP. In general, LOI/application-based projects submitted directly by the communities are identified within their updated mitigation strategies. Communities may also have included other



LOI/application-based projects submitted by special-purpose districts (e.g., fire or school districts), local utilities, and hospitals and health care entities.

From April 2015 to March 2016, members of the Planning Committee and the planning consultant worked directly with each community (phone, email, local support meetings) to assist with the development and update of their annex and include mitigation strategies, focusing on identifying well-defined, implementable projects with a careful consideration of benefits (risk reduction, losses avoided), costs, and possible funding sources (including mitigation grant programs).

As new additional potential mitigation actions, projects, or initiatives became evident during the plan update process, included as part of the risk assessment update and as identified through the public and stakeholder outreach process (see Section 3), communities were made aware of these either through direct communication (local meetings, email, phone) or via their draft municipal annexes.

To help support the selection of an appropriate, risk-based mitigation strategy, each annex provides a summary of hazard vulnerabilities identified during the plan update process, either directly by municipal representatives, through review of available county and local plans and reports, or through the hazard profiling and vulnerability assessment process.

Concerted efforts were made to assure that municipalities develop updated mitigation strategies that included activities and initiatives covering the range of mitigation action types described in recent FEMA planning guidance (FEMA's *Local Mitigation Planning Handbook* March 2013). This specifically includes:

- **Local Plans and Regulations** – These actions include government authorities, policies, or codes that influence the way land and buildings are being developed and built.
- **Structure and Infrastructure Projects** – These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct man-made structures to reduce the impact of hazards.
- **Natural Systems Protection** – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- **Education and Awareness Programs** – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as the NFIP and CRS, StormReady (NOAA) and Firewise (NFPA) Communities.

In consideration of federal and state mitigation guidance, the Planning Committee recognized that all municipalities would benefit from the inclusion of certain mitigation initiatives. These include initiatives to address vulnerable public and private properties, including RL and SRL properties; initiatives to support continued and enhanced participation in the NFIP; improved public education and awareness programs; and initiatives to support county-wide and regional efforts to build greater local mitigation capabilities.

In May 2015, a second mitigation strategy workshop was conducted by the planning consultant; both, FEMA Region II and NJOEM were invited. The purpose of the second workshop was for all participating jurisdictions to support receive additional assistance on the identification, evaluation, and prioritization of local mitigation strategies, as well as how to present and document this process within the plan. The following significant modifications to the mitigation strategy identification, update, and documentation process were made:

- An overarching effort has been made to better focus local mitigation strategies to clearly defined, readily actionable projects and initiatives that meet the definition or characteristics of mitigation.



- Per NJOEM's advice, broadly defined mitigation objectives were maintained if the community felt it were appropriate to ensure eligibility in the future. For example, if a community has numerous RL properties however specific projects/property-owner interest is not solidified at this time, a general action was maintained to ensure future eligibility.
- Certain continuous or ongoing strategies that represent programs that are, or since the 2011 HMP have become, fully integrated into the normal operational and administrative framework of the community have been identified within the Capabilities section of each annex, and removed from the updated mitigation strategy.
- Where applicable, mitigation projects have been documented with an action worksheet, based on FEMA's Action Worksheet templates and within recent guidance documents. These action worksheets and prioritization tables appear at the end of each jurisdiction's annex.

In September 2015, a webinar was held to provide participating jurisdictions an additional opportunity to ask questions and receive assistance on their mitigation strategy. Municipal annex-support meetings were offered and held throughout the planning process to further assist participants (refer to Table 3-3, Section 3).

Overall a comprehensive-range of specific mitigation initiatives were considered by each plan participant to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected. Table 6-3 lists the common mitigation actions identified across a majority of the communities.



Table 0-1. Comprehensive Range of Mitigation Actions

Municipality	Acquisitions & Elevations	Drainage / Stormwater	Education & Awareness	Generators	Natural Systems Protection	Structure & Infrastructure	Local Plans & Regulations
Sussex County	X		X	X	X	X	X
Andover Borough			X	X	X	X	
Andover Township		X	X	X	X	X	X
Branchville Borough	X		X		X		X
Byram Township	X	X	X	X		X	X
Frankford Township		X	X	X			X
Franklin Borough	X		X	X		X	X
Fredon Township		X	X	X		X	X
Green Township		X	X	X	X	X	X
Hamburg Borough		X	X	X	X	X	X
Hampton Township		X	X	X			X
Hardyston Township		X	X	X		X	X
Hopatcong Borough		X	X	X	X	X	X
Lafayette Township	X	X	X	X	X	X	
Montague Township	X		X	X	X	X	X
Town of Newton	X	X	X	X		X	X
Ogdensburg Borough	X		X	X	X		X
Sandyston Township			X	X		X	
Sparta Township		X	X	X	X	X	
Stanhope Borough			X	X		X	X
Stillwater Township	X		X	X			
Sussex Borough		X	X	X	X	X	
Vernon Township		X	X			X	X
Walpack Township			X	X			
Wantage Township			X	X			X



6.5.3 Update of County Mitigation Strategies

The update of the county-level mitigation strategies was very similar to the municipal update. It included a review of progress on the actions/initiatives identified in the 2011 HMP, using a process similar to that used to review municipal mitigation strategy progress. The county, through their various department representatives, was provided with a Mitigation Action Plan Review Worksheet identifying all of the county-level actions/initiatives from the 2011 HMP. For each action, relevant county representatives were asked to indicate the status of each action (“No Progress/Unknown,” “In Progress/Not Yet Complete,” “Continuous,” “Completed,” or “Discontinued”), and provide review comments on each.

Projects/initiatives identified as “Complete,” as well as though actions identified as “Discontinued,” have been removed from this 2016 HMP update. Those actions the county has identified as “No Progress/Unknown,” “In Progress/Not Yet Complete,” or “Continuous” that are still considered a priority and are relevant, have been carried forward in the county’s updated mitigation strategy.

Throughout the course of the 2016 HMP update process, additional regional and county mitigation actions have been identified. These were identified through:

- Review of the results and findings of the updated risk assessment
- Review of the findings of the SWOO
- Review of available regional and county plans, reports, and studies
- Direct input from county departments, including:
 - Division of Emergency Management
 - Department of Engineering and Planning

In November 2015, a Steering Committee was held to provide county departments an additional opportunity to complete the county annex and provide input on the updated mitigation strategy (refer to Table 3-3, Section 3).

6.5.4 Mitigation Strategy Evaluation and Prioritization

Section 201.6(c)(3)(iii) of the 44 CFR requires an action plan describing how the identified actions will be prioritized. Recent FEMA planning guidance (March 2013) identifies a modified Social, Technical, Administrative, Political, Legal, Economic, and Environmental (STAPLEE) mitigation action evaluation methodology that uses a set of 10 evaluation criteria suited to the purposes of hazard mitigation strategy evaluation. This method provides a systematic approach that considers the opportunities and constraints of implementing a particular mitigation action.

Based on this guidance, the Steering and Planning Committees have developed and applied an action evaluation and prioritization methodology which includes an expanded set of 14 criteria to include the consideration of cost-effectiveness, availability of funding, anticipated timeline, and if the action addresses multiple hazards.

The 14 evaluation/prioritization criteria used in the 2016 HMP update process are:

- 1) Life Safety – How effective will the action be at protecting lives and preventing injuries?
- 2) Property Protection – How significant will the action be at eliminating or reducing damage to structures and infrastructure?
- 3) Cost-Effectiveness – Are the costs to implement the project or initiative commensurate with the benefits achieved?
- 4) Technical – Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.



- 5) Political – Is there overall public support for the mitigation action? Is there the political will to support it?
- 6) Legal – Does the municipality have the authority to implement the action?
- 7) Fiscal – Can the project be funded under existing program budgets (i.e., is this initiative currently budgeted for)? Or would it require a new budget authorization or funding from another source such as grants?
- 8) Environmental – What are the potential environmental impacts of the action? Will it comply with environmental regulations?
- 9) Social – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
- 10) Administrative – Does the jurisdiction have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?
- 11) Multi-hazard – Does the action reduce the risk to multiple hazards?
- 12) Timeline – Can the action be completed in less than 5 years (within our planning horizon)?
- 13) Local Champion – Is there a strong advocate for the action or project among the jurisdiction’s staff, governing body, or committees that will support the action’s implementation?
- 14) Other Local Objectives – Does the action advance other local objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of other plans and programs?

Participating jurisdictions were asked to use these criteria to assist them in evaluating and prioritizing all mitigation actions identified in the 2016 HMP update (previously identified actions that were carried forward and new mitigation actions). Specifically, for each mitigation action, the jurisdictions were asked to assign a numeric rank (-1, 0, or 1) for each of the 14 evaluation criteria, defined as follows:

- 1 Highly effective or feasible
- 0 Neutral
- -1 Ineffective or not feasible

Further, jurisdictions were asked to provide a brief summary of the rationale behind the numeric rankings assigned, as applicable. The numerical results of this exercise were then used by each jurisdiction to help prioritize the action or strategy as “Low,” “Medium,” or “High.” While this provided a consistent, systematic methodology to support the evaluation and prioritization of mitigation actions, jurisdictions may have additional considerations that could influence their overall prioritization of mitigation actions.

For the 2016 HMP update there has been an effort to develop more clearly defined and action-oriented mitigation strategies. These local strategies include projects and initiatives that have been well-vetted, and are seen by the community as the most effective approaches to advance their local mitigation goals and objectives within their capabilities. As such, many of the initiatives in the updated mitigation strategy were ranked as “High” or “Medium” priority, as reflective of the community’s clear intent to implement, available resources notwithstanding. In general, initiatives that would have had “Low” priority rankings were appropriately screened out during the local action evaluation process.

6.5.5 Benefit/Cost Review

Section 201.6(c)(3)(iii) of the 44 CFR requires the prioritization of the action plan to emphasize the extent to which benefits are maximized according to a benefit/cost review of the proposed projects and their associated



costs. Stated otherwise, cost-effectiveness is one of the criteria that must be applied during the evaluation and prioritization of all actions comprising the overall mitigation strategy.

The benefit/cost review applied for the evaluation and prioritization of projects and initiatives in this 2016 HMP update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the HMGP and PDM grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with a project, action, or initiative.

Costs are the total cost for the action or project, and may include administrative costs, construction costs (including engineering, design and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to the implementation of the project, and may include life-safety, structure and infrastructure damages, loss of service or function, and economic and environmental damage and losses.

When available, jurisdictions were asked to identify the actual or estimated dollar value for project costs and associated benefits. Having defined costs and benefits allows a direct comparison of benefits versus costs, and a quantitative evaluation of project cost-effectiveness. Often, however, numerical costs and/or benefits have not been identified, or may be impossible to quantitatively assess.

For the purposes of this planning process, jurisdictions were tasked with evaluating project cost-effectiveness with both costs and benefits assigned to “High,” “Medium,” and “Low” ratings. Where quantitative estimates of costs and benefits were available, ratings/ranges were defined as:

- Low < \$10,000
- Medium \$10,000 to \$100,000
- High > \$100,000

Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the definitions presented in Table 6-4 were used.

Table 6-2. Qualitative Cost and Benefit Ratings

Costs	
High	Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases).
Medium	The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Low	The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program.
Benefits	
High	Project will have an immediate impact on the reduction of risk exposure to life and property.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property.
Low	Long-term benefits of the project are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly.

For some of the Sussex County initiatives identified, the Planning Committee may seek financial assistance under FEMA’s HMGP or HMA programs. These programs require detailed benefit/cost analysis as part of the



application process. These analyses will be performed when funding applications are prepared, using the FEMA benefit/cost analysis model process. The Planning Committee is committed to implementing mitigation strategies with benefits that exceed costs. For projects not seeking financial assistance from grant programs that require this sort of analysis, the Planning Committee reserves the right to define “benefits” according to parameters that meet its needs and the goals and objectives of this HMP.