

Section 6

Mitigation Action Plan

Contents of this Section

- 6.1 Interim Final Rule Requirement for the Mitigation Action Plan
- 6.2 Mitigation Goals, Objectives, and Actions
- 6.3 Potential Mitigation Actions
- 6.4 Sussex County Mitigation Actions
- 6.5 Municipal Mitigation Actions
- 6.6 Prioritization and Implementation of Mitigation Actions

6.1 Interim Final Rule Requirement for the Mitigation Action Plan

Requirement §201.6(c)(3): *The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*

Requirement §201.6(c)(3)(i): *[The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.*

Requirement §201.6(c)(3)(ii): *[The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. [The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.]*

Requirement: §201.6(c)(3)(iii): *[The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.*

Requirement §201.6(c)(3)(iv): *For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting Federal Emergency Management Agency (FEMA) approval or credit of the plan.*

6.2 Mitigation Goals, Objectives, and Actions

This section contains goals, objectives, and action items for the Sussex County All-Hazards Pre-Disaster Mitigation Plan. For the purposes of this Plan, the following definitions are proposed:

- **Goals** are general guidelines that explain what the county and participating municipalities want to achieve. Goals are expressed as broad policy statements representing desired long-term results.
- **Objectives** (or strategies) describe strategies to attain an identified goal. Objectives are more specific statements than goals; objectives are also usually measurable and can have a defined completion date.
- **Mitigation Actions** are the specific steps (projects, policies, and programs) that advance a given objective. They are highly focused, specific, and measurable.

The hazard identification and risk assessment in Sections 3 and 4 consisted of identifying the hazards that affect Sussex County and the potential for damage to community assets that are vulnerable to the hazards. Section 5 identified the strengths and weaknesses of local capabilities. The goals and objectives described below were established by the Northern Delaware River Region Hazard Mitigation Steering Committee (HMSC) and validated by the Sussex County Hazard Mitigation Working Group (HMWG) members in response to these assessment results. Many of the actions described below apply to the county and all participating municipalities.

The broad goals of the Sussex County All-Hazards Pre-Disaster Mitigation Plan are as follows:

- Goal 1: Improve **EDUCATION AND OUTREACH** efforts regarding potential impacts of hazards and the identification of specific measures that can be taken to reduce their impact
- Goal 2: Improve **DATA COLLECTION, USE, AND SHARING** to reduce the impact of hazards
- Goal 3: Improve **CAPABILITIES, COORDINATION, AND OPPORTUNITIES** at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities
- Goal 4: Pursue **OPPORTUNITIES TO MITIGATE** repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs, and activities

6.3 Potential Mitigation Actions

Sussex County has identified several hazard mitigation actions that would benefit the county. These were identified in the HMSC and HMWG meetings, which included input from representatives of governmental organizations, local businesses, and private citizens. This was based in part on consideration of the range of potential mitigation actions for hazards faced by Sussex County and its constituent municipalities, which are described below.

Public Awareness

Insurance industry and emergency management research has demonstrated that awareness of hazards is not enough. People must know how to prepare for, respond to, and take preventive measures against threats from natural hazards. This research has also shown that a properly run local information program is more effective than national advertising or public campaigns.

Although concerted local, county, and statewide efforts to inform the public exist, lives and property continue to be threatened when segments of the population remain uninformed or chose to ignore the information available. Public education serves to assist the communities with problems experienced from floods, hurricanes, tornadoes, and thunderstorms/lightning/high winds as well as other lower priority hazards. Educating the public of these life and property saving techniques must remain a high priority item at the local, state, and federal level and is consistent with Goal 1.

Projects identified by the HMSC and HMWG are as follows:

- Develop *All Hazards* public education and outreach program for hazard mitigation and preparedness
- Initiate a public awareness program on local TV for hazard safety
- Conduct evacuation exercises with and for local Office of Emergency Management (OEM) personnel and private citizens
- Conduct yearly workshops related to FEMA hazard mitigation grant programs, including Flood Mitigation Assistance (FMA) Grant Program, Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) Grant Program, Severe Repetitive Loss (SRL) grant program, and Repetitive Flood Claims (RFC) grant program, with a focus on those aspects available to private firms and property owners (coordinated with Action 1.B.1, below)
- Educate the public through New Jersey Office of Emergency Management (NJOEM) and New Jersey Forrest Fire Service (NJFS) outreach programs and hazard mitigation workshops

National Flood Insurance Program, Floodplain Management, and Building Codes

Improved floodplain management, including land use planning, zoning, and enforcement at the local level can reduce flood related damages for both existing buildings and new development and are consistent with Goal 3. The use of the National Flood Insurance Program (NFIP) is critical to the reduction of future flood damage costs to the taxpayer.

About 8.17 percent of Sussex County is located in a 100-year floodplain. All developments, regardless of the location, require a permit to include buildings, fill, and any other type development. Under New Jersey's *home rule* system, different offices in the various municipalities have authority over the necessary permits.

The NFIP requires that when the cost of reconstruction, rehabilitation, addition, or other improvements to a building equals or exceeds 50% of the fair market value, then the building must meet the same construction requirements as a new building. Substantially damaged buildings must be brought up to new construction standards. A residence or building damaged so that the cost of repairs equals or exceeds 50% of the structure's fair market value must also be elevated above the Base Flood Elevation (BFE) in flood zones where BFE's are available.

See Table 6.3-1 for the dates on which of the municipalities in Sussex County joined the NFIP. Each municipality within Sussex County is expected to appoint a Floodplain Manager to enforce municipal floodplain ordinances. These ordinances are intended to address methods and practices to minimize flood damage to new and substantial home improvement projects, as well as addressing zoning and sub-division ordinances and state regulations as enforced through the New Jersey Department of Environmental Protection.

Table 6.3-1: National Flood Insurance Program

Name of Community	Date Joined NFIP
Andover Borough	03/04/83
Andover Township	02/04/83
Branchville Borough	03/11/83
Byram Township	01/05/84
Frankford Township	03/11/83
Franklin Borough	03/15/84
Fredon Township	03/11/83
Green Township	10/08/82
Hamburg Borough	03/15/84
Hampton Township	10/07/83
Hardyston Township	02/25/83
Hopatcong Borough	04/01/83
Lafayette Township	03/18/83
Montague Township	03/04/83
Newton Town	04/18/83
Ogdensburg Borough	09/05/84
Sandyston Township	12/17/91
Sparta Township	10/16/84
Stanhope Borough	11/17/82
Stillwater Township	02/25/83
Sussex Borough	02/02/83
Vernon Township	02/15/84
Walpack Township	03/18/83
Wantage Township	02/15/84

Within floodplain management as a whole, the education process must play an important role. As noted above, an effective education program should be implemented to show citizens the importance of building codes and ordinances and how cost effective they could be in reducing future damages.

Established through the NFIP, the Community Rating System (CRS) is a program that counties and municipalities can elect to join. Once a jurisdiction has joined, participants residing in that jurisdiction receive a discount on their flood insurance premiums. As a result of being part of the CRS, the jurisdiction would have to actively pursue public outreach programs. One of the requirements of CRS is an annual outreach project, such as a Repetitive Loss Outreach Program. This program would focus on repetitive loss areas within the jurisdiction and consist of three main components.

The first is to advise the homeowners that they live in a repetitive loss area and could be subject to flooding. The second is to give the homeowner appropriate property protection measure guidelines. The third is to make the homeowner aware of the basic facts about flood insurance.

The New Jersey Unified Construction Code is the mandated construction code for all New Jersey municipalities. The State of New Jersey Department of Community Affairs issues licenses to all construction code and cub-code officials that enforce the state's Uniform Construction Code.

However, the state's Department of Environmental Protection is the lead state agency for the administration of the state's Floodplain Management Program. Each community that participates in the NFIP must adopt and enforce municipal floodplain management regulations that meet or exceed the minimum requirements of the NFIP as directed by the state's Floodplain Management Program. This requirement is in addition to the enforcement of the State Uniform Construction Code.

Each municipality in Sussex County that is a participating community in the NFIP Program is required to have both a well trained municipal floodplain manager and construction code official. To ensure adequate enforcement of both codes, each community in Sussex County should encourage additional training opportunities for all code enforcement personnel and to include its municipal floodplain manager.

Floodplain management and building codes serve to assist the communities with problems experienced from floods, hurricanes, tornadoes, and thunderstorms/lightning/high winds as well as other lower priority hazards.

Flood Mitigation Actions

Retrofitting structures prone to periodic flooding is an effective mitigation technique to reduce the flood loss of property and is consistent with Goal 4. Techniques include the elevation of structures, acquisition, mitigation reconstruction, dry flood-proofing, wet flood-proofing, drainage improvements, and installation of generators.

- Elevation: involves raising a structure on a new foundation so that the lowest floor is above the BFE. Almost any type and size of structure can be elevated.
- Acquisition of structures: or *buyout* option is the most effective mitigation technique to reduce the loss of property due to flooding. The owners of repetitive flood loss structures sell their structure to the municipality on a cost share basis for the fair market value of the structure prior to the last flood event. The structure is removed/demolished and a deed restriction is placed on the property for perpetuity, thus eliminating the structure from future flood damage. This approach is most effective when flood-prone structures located within the same vicinity are grouped together and acquired. The remaining property can be converted into usable recreational space with minor structure restrictions.
- Mitigation Reconstruction: is a component of the SRL grant program that allows demolition and reconstruction of structures when traditional elevation cannot be implemented. This activity can be used for structures that were substantially damaged or destroyed. Currently, this is a pilot program utilized mainly on the gulf coast but can be considered a potential approach to mitigation activities.

- Dry flood-proofing: techniques include the building of floodwalls adjacent to existing walls, the installation of special doors to seal out floodwaters, and the installation of special backflow valves for water and sewer lines. Wet flood-proofing includes low cost mitigation measures such as raising air conditioners, heat pumps, and hot water heaters on platforms above the BFE.
- Wet flood-proofing: includes measures applied to a structure that prevent or provide resistance to damage from flooding while allowing floodwaters to enter the structure or area. Generally, this includes properly anchoring the structure, using flood resistant materials below the BFE, protecting mechanical and utility equipment, and use of openings or breakaway walls. Application of wet flood-proofing as a flood protection technique under the NFIP is limited to enclosures below elevated residential and non-residential structures and to accessory and agricultural structures that have been issued variances by the municipality.
- Drainage: Improving the drainage capacity around roads and low-lying areas is a time-tested technique to mitigate flood damage. Maintenance of drainage canals and laterals is essential to maximize their efficiency and continued long term effectiveness. Actions in general to reduce the effects of flooding are widening and deepening the earthen canals, cleaning of existing ditches, and replacing existing culverts, upgrading pumps, and installing check valves and inverts in certain culverts. Maintaining and improving drainage serves to assist the municipalities with problems experienced from floods and severe storms.
- Generators: Another cost effective retrofitting technique includes the installation of generators. By providing power with generators during and after severe storms, many critical facilities may continue to provide necessary services to municipalities. The installation of generators serves to assist a municipality with problems experienced from floods, high wind, severe storms, earthquakes, and dam failure.

Wind Retrofitting Mitigation Actions

Structures can be retrofitted to withstand high winds by installing hurricane shutters, roof tie-downs, and other storm protection features. The exterior integrity is maintained by protecting the interior of the structure and providing stability against wind hazards associated with hurricanes. These types of measures can be relatively inexpensive and simple to put in place.

Another retrofitting technique is to bury electric power lines to avoid tree limbs falling on them or from wind damage resulting in a break in service to the consumer. Burying electric power lines serves to assist the communities with problems experienced from floods, high winds, and severe storms.

Early Warning Systems

With sufficient warning of a flood, a community and its residents can take protective measures such as moving personal property, cars, and people out of harm's way. When a flood threat recognition system is combined with an emergency response plan that addresses the municipality's flood problems, considerable flood damage can be prevented. This system must be coupled to warning the general public, carrying out appropriate tasks, and coordinating the flood response plan with operators of critical facilities.

A comprehensive education and outreach program is critical to the success of early warning systems so that the general public, operators of critical facilities, and emergency response personnel will know what actions to take when warning is disseminated.

Early warning systems serve to assist municipalities with problems experienced from floods, high winds, severe storms, and dam failure, as well as other lower priority hazards.

Earthquakes

Significant seismic events, while not common to the region, do pose a potentially significant threat to Sussex County and the surrounding area. The most practical preventative action to be considered, concerns appropriate building code enforcement. While this is not necessarily practical for existing structures except for renovations or reconstruction, there are activities that can be taken to mitigate further exposure to risk.

For example, one technique is a building retrofit involving the use of reinforced concrete materials in combination with cross ties to provide current structures with additional stabilization. The addition of seismic stabilizer platforms for important or critical mechanicals within buildings will also significantly reduce adverse impacts.

Dam and Levee Failure

Mitigation for dam and levee failure is often similar to that which can be done for flooding; however, dam and levee failure has the potential to cause catastrophic damage for which the majority of flood mitigation measures would be ineffective.

- **Educational Outreach:** develop and conduct educational outreach programs on the associated risks that close proximity to dams and levees presents.
- **Building Codes:** adopt building codes using a flood protection elevation which is based on dam or levee failure water levels.
- **Warning Systems:** install warning systems to prevent loss of life in the event of a dam or levee failure.
- **Land Use:** avoid construction in areas located within a dam or levee high velocity inundation zone.

- Inundation Studies: conduct detailed studies to identify the inundation areas including potential water velocity and height.

Wildfire

The following mitigation measures can be applied to those areas of the county which are designated as wildfire risk zones.

- Educational Outreach: develop and conduct educational outreach programs on wildfire prevention including training on fire safe building for contractors and homeowners.
- Retrofitting: existing buildings can be retrofitted to reduce their vulnerability to wildfires. Potential measures include covering roof vents with wire mesh to prevent entry of embers or flaming debris and replacing flammable roof materials such as wood or certain types of shingles. Fire resistant roofing materials include various tiles, fiberglass shingles, and single ply membranes.
- Safety Zones: safety zones can be created around structures by reducing or eliminating brush, trees and vegetations around a home or facility. FEMA recommends using a 30' safety zone, including keeping grass below 2" tall and clearing all fallen leaves and branches promptly.
- Fire Breaks: roads and trails can be planned so as to serve a dual function as firebreaks. Firebreaks are areas of inflammable materials which create a fuel break and do not allow fires to spread.

6.4 Sussex County Mitigation Actions

The HMSC and HMWG developed the following program of mitigation actions in response to the risk and capability assessments (see Sections 4 and 5) that will be implemented on a countywide basis. These general actions are presented in Table 6.4-1.

Table 6.4-1: Sussex County Hazard Mitigation Goals, Objectives, and General Actions

GOAL 1: Improve EDUCATION AND OUTREACH efforts regarding potential impacts of hazards and the identification of specific measures that can be taken to reduce their impact						
Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
Objective 1.A: Increase awareness of risks and understanding of the advantages of mitigation by the general public and local government officials (see also municipal actions in Table 6.3.2-1).	1.A.1: Develop <i>All Hazards</i> public education and outreach program for hazard mitigation and preparedness. See additional description regarding Action 1.A.1 on page 6-12.	High	SCDEM and municipal OEM	One Year	SCDEM and municipal OEM personnel	Better informed populace creates a greater willingness and expectation to participate in mitigation actions.
	1.A.2: Initiate a public awareness program on local cable TV for hazard safety.	Medium	SCDEM and municipal OEM	Six Months- One Year	SCDEM and municipal OEM personnel, local cable TV	A better informed and involved population reduces risk and loss.

GOAL 1: Improve EDUCATION AND OUTREACH efforts regarding potential impacts of hazards and the identification of specific measures that can be taken to reduce their impact

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	1.A.3: Conduct yearly workshops related to the Federal Emergency Management Agency (FEMA) hazard mitigation grant programs, including Flood Mitigation Assistance (FMA) program, Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program, Severe Repetitive Loss (SRL) program, and Repetitive Flood Claim (RFC) program, with a focus on those aspects available to private firms and property owners (coordinated with Action 1.B.1, below).	High	SCDEM, NJOEM	Ongoing	Existing state assets and federal grants	Makes local officials and the public aware of federal grants; increases participation.
	1.A.4: Educate the public through New Jersey Office of Emergency Management (NJOEM) and New Jersey Forest Fire Service outreach programs and hazard mitigation workshops.	High	SCDEM, NJOEM, New Jersey Forest Fire Service	Ongoing	Existing state resources	Encourages the development of Pre-Disaster Mitigation plans and participation in mitigation grant programs.

GOAL 1: Improve EDUCATION AND OUTREACH efforts regarding potential impacts of hazards and the identification of specific measures that can be taken to reduce their impact

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
Objective 1.B: Increase local government official awareness regarding funding opportunities for mitigation.	1.B.1: Conduct yearly workshops related to FEMA hazard mitigation grant programs, including FMA, HMGP, PDM, SRL, and RFC (coordinated with Action 1.A.4, above).	High	SCDEM, NJOEM	Ongoing	Existing state assets and federal grants	Makes local officials aware of federal grants and increases participation.
Objective 1.C: Increase local government official awareness regarding opportunities for participating in and contributing to future Plan updates.	1.C.1: Reach out to municipal Floodplain Administrators, departments of planning, public works, engineering, etc. regarding the importance of hazard mitigation planning and provision of municipal plans and data for planning purposes.	High	SCDEM and municipal OEM	Ongoing	Existing county and municipal resources	Makes local officials aware of benefits of plan participation.

County Action 1.A.1: Develop All Hazards public education and outreach program for hazard mitigation and preparedness.

Responsible Agency: County and municipal OEMs.

SCDEM will implement a county-wide committee with local municipalities to develop an “All Hazards” Public Education and Outreach Campaign. The Hazard Mitigation Awareness and Education Campaign will include *all natural hazards* identified as applicable to Sussex County.

To foster a more hazard-resilient community, SCDEM will work closely with external stakeholders – especially organizations that can provide technical information and/or assistance in the areas of hazard identification and risk assessment. Tapping into local resources, the County will institute a robust, multi-pronged campaign. Participating jurisdictions will work closely with SCDEM to ensure that the targeted outreach meets its intended audience.

County Tasks:

1. SCDEM will host a Hazard Mitigation Awareness and Education Website on the Sussex County website.
2. SCDEM and the Sussex County Planning Department will be responsible for conducting outreach to other relevant stakeholders – e.g., FEMA, NJOEM, colleges and universities, Regional Planning Commissions, river and watershed-based non-profits, the NJ American Planning Association — and internal stakeholders— Sussex County Departments of Planning, Health, Parks, and GIS. SCDEM and the Sussex County Planning Department will create flyers for dissemination via the Sussex County Fair and other Sussex County events as well as for local distribution via municipal offices, libraries, schools, etc.
3. SCDEM and the Sussex County Planning Department will each be identified as a local resource.

Participating Jurisdiction Tasks:

1. Jurisdiction will provide a direct link to the Sussex County website from the jurisdiction website.
2. Jurisdiction OEMs (with/or Planning Department) will be responsible for identifying and engaging any local agencies or nonprofits that could serve as hazard and/or mitigation subject matter experts and providing contact information (and regular updates) to SCDEM for inclusion on the website.
3. Jurisdiction OEMs (with/or Planning Department) will publicize the website via in-person methods. In-person methods may and should be tailored to the community. Examples include the jurisdiction representative speaking at local fairs, May Day, little league games, and public meetings.
4. Jurisdiction OEMs (with/or Planning Department) will publicize the website via posting/distribution of the Sussex County promotional flyer at high-visibility locations, e.g., municipal offices, libraries, schools, etc.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
Objective 2.A: Improve availability to the county and participating municipalities of data related to all relevant hazards for use in future planning efforts.	2.A.1: Develop and maintain relationships with organizations that can provide technical information and/or assistance in the areas of hazard identification and risk assessment.	High	SCDEM, Rutgers University, New Jersey Geologic Survey (NJGS), National Oceanic Atmospheric Administration (NOAA), and United States Army Corps of Engineers (USACE)	Ongoing	Existing county staff, FEMA, NJOEM, Rutgers University, NJGS, other federal agencies including NOAA and USACE	Provides the basis for making decisions about where to focus mitigation activities, including further study, and eventually, mitigation projects.
	2.A.2: Undertake site-specific studies to better characterize flood risks to areas with extensive flood loss histories (see also municipal actions in Table 6.3.3-1 for additional detail).	Medium	SCDEM and municipal OEM	Starting within six months, then ongoing	SCDEM staff, municipal staff	This is an essential step in developing flood mitigation actions.
	2.A.3: Use best possible flood data, including Digital Flood Insurance Rate Map and Map Mod data, if available, in next plan update. Track implementation of Risk MAP initiative to ensure Sussex County and municipalities gain full advantage of opportunities under this program.	High	SCDEM and municipal OEMs	Three Years	Existing staff	This is essential data for establishing flood risk.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.4: Bi-annually update and verify status of repetitive loss and severe repetitive loss lists from the National Flood Insurance Program (NFIP).	Medium	SCDEM and municipal OEMs	Ongoing	Existing staff	Essential to continuing the county's efforts to reduce flood losses. Enables the county to appropriately prioritize its actions to mitigate repetitive loss and severe repetitive loss properties, in accordance with FEMA requirements (and contributes to qualifying the county and local jurisdictions for the 90:10 federal-local match under the SRL program).
	2.A.5: Inventory critical facilities to identify those in geographic areas that may be prone to high ground motion during earthquakes (due to proximity to faults or to soil characteristics), and those with structures that may be at risk during an earthquake.	High	SCDEM, with support from NJGS	One-Two Years	FEMA grants, existing staff	Allows risk-based decisions regarding protection of critical facilities.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.6: Coordinate with state efforts to prioritize critical facilities and conduct more detailed earthquake risk assessments, taking into account the relative importance of the facility and the level of seismic hazard.	High	SCDEM, FEMA, NJGS	One Year	FEMA grants, existing staff	Serves as first step in a long-term plan to reduce risks to the most critical county facilities.
	2.A.7: Work with New Jersey Geological Survey (NJGS) to determine soil and shake characteristics at specific sites that the county has identified as priority critical facilities with potential vulnerabilities to earthquake forces, and then work with engineers to develop appropriate projects.	High	SCDEM and municipal OEMs	Two Years	TBD, potential collaboration with ongoing NJGS Hazards US-based earthquake studies	This is an essential step in developing appropriate mitigation actions for priority facilities.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.8: Coordinate with NJGS and other county, state and federal agencies to better identify specific sites in Sussex County that may be exposed to the effects of geo-hazards such as landslides, sinkholes, and subsidence.	High	SCDEM, municipal OEMs, NJDEP, NJGS	One Years	FEMA grants, existing staff	Although risk does not appear to be particularly high from these hazards, there remains a need to better understand the hazards on a site-specific basis. Studies will be used as the basis for developing additional actions and strategies to mitigate risk, particularly when critical facilities are at risk.
	2.A.9: Using a prioritized list of state, county, and local facilities, coordinate with state effort to survey wind vulnerabilities, based on criteria such as age of the facility, value of operations, proximity to the coast, etc.	Medium	SCDEM, NJOEM, with cooperation of other agencies that own and/or operate the facilities; New Jersey State Climatologist	One Year	Existing staff and resources	Although wind is not as significant a risk to the county as some other hazards, there are likely some critical facilities that are quite vulnerable to wind hazards, and these vulnerabilities may be relatively inexpensive to mitigate.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.10: Conduct wind risk assessments on a limited number of high-priority facilities that appear to be vulnerable to high winds. Assessments will use standard FEMA guidelines, procedures, and software, including the wind hazard database.	High	SCDEM and municipal OEMs	One Year	Existing staff and resources	Quantifies risk to most important facilities.
	2.A.11: Coordinate with state efforts to inventory or survey of prioritized areas to determine if there is a need for additional study or data collection related to wildfire and/or urban-interface fires. Focus of inventory/study will be on identifying areas where there exist vulnerable populations or built environment and/or areas where fuel loads and other conditions suggest potential for wildfire risk.	High	SCDEM, municipal OEMs, New Jersey Forest Fire Service, NJOEM	Ongoing	Existing staff and resources	Establishes basis for additional studies and eventually mitigation actions, if they are indicated.
	2.A.12: Coordinate with state efforts to maintain current information about fuel loads and conditions that may affect potential for fires.	High	SCDEM, municipal OEMs, New Jersey Forest Fire Service	Ongoing	Existing staff and resources	Provides a basis for risk assessment.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.13: For areas with significant risk from wildfires or urban interface fires, perform detailed studies to objectively determine (a) potential for wildfires, including likely magnitude, & (b) vulnerabilities of surrounding populations, built environment, and functions.	Medium	SCDEM, municipal OEMs, New Jersey Forest Fire Service, NJOEM	Ongoing	Existing staff and resources	Provides a basis for risk assessment.
	2.A.14: Coordinate with state efforts to conduct wildfire risk assessments for areas and assets that are determined to have the most hazard (fuel load, etc.) potential, and the most vulnerable structures, populations, or operations.	High	SCDEM, New Jersey Forest Fire Service, outside engineering consultants	Ongoing	TBD, potential FEMA grants to conduct studies as indicated	Quantifies which facilities are at most risk and forms basis for determining where mitigation actions should be contemplated.
	2.A.15: Maintain effective coordination and information sharing related to hazardous material sites with NJOEM and the Right to Know Network.	Medium	SCDEM, RTK Network, NJOEM.	Ongoing	Existing staff and resources	Provides a basis for prioritizing potential hazmat sites for further study and potential responses.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.16: Complete data collection for Geographic Information System (GIS) analysis and mapping of potential areas of impact related to hazardous material sites.	High	SCDEM, county agencies	Ongoing	Existing staff and resources	Provides a basis for prioritizing potential hazmat sites for further study and potential responses.
	2.A.17: Integrate data about hazardous materials with most current available information about other risk factors, e.g. population, climate, other site-specific characteristics.	High	SCDEM, Sussex County HazMat, RTK Network, NJDEP, United States Environmental Protection Agency	Ongoing	Existing staff and resources	Potentially allows integration of hazardous materials information with data related to natural hazards.
	2.A.18: Complete a detailed analysis of past losses related to winter storms to determine if additional study is indicated.	High	Sussex County and local agencies with critical facilities	One-Two Years	Existing staff and resources	Provides a basis for determining if any additional study is warranted; data can be used as part of next plan update.
	2.A.19: Undertake a survey of critical facilities to identify and prioritize those that may have structural characteristics that make them vulnerable to excessive snow and ice loads.	High	Sussex County and local agencies with critical facilities	Two Years	FEMA grants and existing staff	Provides a basis for prioritizing actions, including mitigation.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.20: Work with appropriate agencies to identify specific areas that are vulnerable to storm effects, then inventory assets and populations in these areas as the basis for a risk calculation.	High	SCDEM, NOAA, USACE, local officials, NJDEP	Three Years	FEMA grants and existing staff	Provides a basis for determining if any further risk assessment action is warranted.
	2.A.21: Work with New Jersey Department of Environmental Protection to more fully understand the dam hazard rankings and methodology behind them, particularly regarding high-hazard sites.	High	SCDEM, NJDEP	Three Years	NJDEP	Provides a basis for further development and prioritization of any future actions or strategies.
	2.A.22: Undertake more detailed engineering studies of dams that may pose risks to the county, based on additional data collected from state or federal agencies.	High	SCDEM, NJDEP, NJOEM	Ongoing	NJDEP	Provides a basis for any additional work on risk assessment, or on specific mitigation actions, including modifications to structures, evacuation plans, or public information.
	2.A.23: Conduct detailed risk assessments for dams that appear to have vulnerabilities, and where there is potential for significant damage or loss of life.	High	SCDEM, NJDEP, engineering consultants	Ongoing	SCDEM, NJDEP, USACE	Quantifies potential losses from dam failures where vulnerabilities have been identified

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.24: Consolidate and incorporate relevant local data related to hazards, extent, probability, exposure, risk, history, etc.	High	SCDEM and Municipal OEMs	Ongoing	Existing resources	Basis for hazard identification, risk assessment, and mitigation strategies
	2.A.25: Work with ongoing county, state, and federal efforts to develop and maintain hazard-specific geospatial data necessary to perform full risk assessments for all relevant hazards in Sussex County.	High	SCDEM	Ongoing	Existing county staff, FEMA, NJOEM, Rutgers University, NJGS, other federal agencies including NOAA and USACE	Essential step in developing mitigation actions
	2.A.26: Conduct detailed risk assessments for levees which appear to have vulnerabilities, and where there is potential for significant damage or loss of life.	High	SCDEM, DELO, NJDEP, engineering consultants	Ongoing	NJDEP, DELO, USACE	Quantifies potential losses from levee failure where vulnerabilities have been identified.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	2.A.27: Work with NJDEP and other agencies to compile better information about levees in the State, including inventories, engineering data, and any other studies (in particular those that may discuss or catalog past levee failures).	High	SCDEM, DELO, NJDEP, engineering consultants	Ongoing	NJDEP, DELO, USACE	Although levees do not appear to pose a high risk to the County, information available at present is so limited that it is not possible to make even a preliminary determination regarding the need for further studies or actions. This action will allow officials to begin this process.
	2.A.28: Conduct a detailed study to identify and map erosion hazard zones.	High	SCDEM, NJDEP, and USACE	Ongoing	NJDEP, USACE	Mapping and defining erosion hazard zones will be useful to future development decisions.
	2.A.29: Undertake more detailed engineering studies of levees that may pose risks to the county, based on additional data collected from local, state or federal agencies.	High	SCDEM, NJDEP, NJOEM	Within 6 months of plan adoption	NJDEP	Basis for any additional work on risk assessment, or on specific mitigation actions, including modifications to structures, evacuation plans, or public information.
	2.A.30: Coordinate with state efforts to undertake detailed vulnerability assessments and develop mitigation options for critical facilities in A and AE zones.	High	Sussex County and municipal OEMs	To be determined based on funding	Existing staff	Step in process of securing grant funds to mitigate risks to these sites.

GOAL 2: Improve DATA COLLECTION, USE, AND SHARING to reduce the impact of hazards

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
Objective 2.B: Provide government officials and local practitioners with educational opportunities and information regarding best practices for hazard mitigation planning, project identification, and implementation.	2.B.1: Participate in the Emergency Preparedness Conference and workshops.	High	SCDEM and municipal OEMs, NJOEM, New Jersey Forest Fire Service	Ongoing	Existing state resources	The Emergency Preparedness Conference is an important venue to promote and increase participation in hazard mitigation programs and reaches a wide variety of people and interests.
Objective 2.C: Acquire and maintain detailed data regarding critical facilities such that these sites can be prioritized and risk-assessed for possible mitigation actions.	2.C.1: Develop a database inventory of critical facilities countywide (county-, local-, and privately-owned), including fire and police stations, medical facilities, and major public buildings important for emergency response and recovery, and critical lifeline transportation and utility nodes such as bridges, water treatment plants, wastewater treatment plants, high voltage electric substations, and hazardous materials facilities.	High	SCDEM and municipal OEM	Ongoing	Existing staff, possibly consultants depending on funding availability	Developing basic information such as this will allow the state to meet federal requirements for prioritizing mitigation grant funds that will be directed to reducing losses to critical facilities.
	2.C.2: Prioritize critical facilities and complete Phase 1 site surveys to identify vulnerabilities.	High	SCDEM and municipal OEM	Commencing immediately, then ongoing	Existing staff, possibly consultants depending on funding availability.	This is an essential first step in understanding risks and developing mitigation actions.

GOAL 3: Improve CAPABILITIES, COORDINATION, AND OPPORTUNITIES at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
Objective 3.A: Continue support of hazard mitigation planning, project identification, and implementation at the municipal and county level.	3.A.1: Continue working with the state, as well as local jurisdictions, to encourage local cooperation in making Repetitive Loss (RL) (and SRL) property mitigation a high priority, and offering municipalities technical support in carrying out the requirements of FEMA mitigation programs as well as current information related to RL and SRL properties.	High	SCDEM	Ongoing	Existing staff	This represents a basic requirement to initiate and sustain program momentum for RL and SRL mitigation.
	3.A.2: Provide grants information, planning tools, training, and technical assistance to increase the number of public and private sector hazard mitigation projects.	High	SCDEM, NJOEM, FEMA Region II	Ongoing	Existing Resources, Mitigation Grant	Expanding the number of hazard mitigation projects will improve the county's resistance to hazards and reduce the impact of hazard events on its municipalities.
	3.A.3: Conduct direct outreach and education to municipal OEMs and other potential participants in Plan maintenance and future Plan updates.	High	SCDEM	Ongoing	Existing resources	Increases efficacy and participation in hazard mitigation planning

GOAL 3: Improve CAPABILITIES, COORDINATION, AND OPPORTUNITIES at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	3.A.4: Work with NJOEM and FEMA to incorporate "recommended revisions" per NJOEM and FEMA Region II review of this Plan into future Plan updates.	High	SCDEM	Ongoing	Existing resources	Builds on successful completion of initial Plan and incorporates NJOEM and FEMA input.
Objective 3.B: Support increased NFIP/CRS participation.	3.B.1: Conduct community outreach, workshops, and training to increase NFIP participation (coordinate with outreach actions listed under Objectives 1.A and 1.B).	High	SCDEM, NJOEM	Ongoing	Existing resources	This action encourages participation in the program, so that flood losses will be insured and covered, and it allows eligibility in the FMA program.
	3.B.2: Encourage municipalities to participate in the Community Rating Survey (CRS) program, including potentially setting up CRS site visits and/or workshops for interested municipalities.	High	SCDEM, NJOEM	Ongoing	Existing resources	Encourages participation in the CRS program so that NFIP premiums can be reduced and floodplain management improved.
	3.B.3: Encourage municipalities to include identification and prioritization of actions related to future participation in and compliance with the NFIP.	High	SCDEM and municipal OEM	Ongoing	Existing resources	Encourages participation in the CRS program so that NFIP premiums can be reduced and floodplain management improved.

GOAL 3: Improve CAPABILITIES, COORDINATION, AND OPPORTUNITIES at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
<p>Objective 3.C: Support increased integration of municipal/county hazard mitigation planning and floodplain management with effective municipal/ county zoning, regulation, subdivision regulation, and comprehensive planning.</p>	<p>3.C.1: Encourage enforcement of floodplain management as it relates to new and existing construction by integrating hazard mitigation practices with zoning, subdivision ordinances, comprehensive planning, and other land use tools at the municipal level.</p>	<p>High</p>	<p>SCDEM, NJDEP, municipal officials</p>	<p>Ongoing</p>	<p>Existing Resources and federal grant funds (FEMA Community Assistance Program-State Support Services Element)</p>	<p>Guides communities in a more effective control and use of floodplains.</p>
	<p>3.C.2: Coordinate with state efforts to encourage the New Jersey League of Municipalities to become more involved in mitigation activities, and in particular to support the activities described in Action 3.C.1 and 3.D.1.</p>	<p>High</p>	<p>SCDEM NJOEM, New Jersey League of Municipalities</p>	<p>Ongoing</p>	<p>Existing staff</p>	<p>Advances all goals in the Plan by increasing preparedness and knowledge of citizens, and law and policymakers.</p>

GOAL 3: Improve CAPABILITIES, COORDINATION, AND OPPORTUNITIES at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
<p>Objective 3.D: Elicit and support efforts by federal and state legislatures and agencies to address shortcomings in existing laws, programs, and administrative rules related to hazard mitigation.</p>	<p>3.D.1: Encourage enforcement of floodplain management as it relates to new and existing construction by integrating hazard mitigation practices with zoning, subdivision ordinances, comprehensive planning, other land use tools, and environmental and other regulatory mechanisms via state requirements, reviews, and regulations. Coordinate with the State Planning Commission to integrate the State Development and Redevelopment Plan and the State Hazard Mitigation Plan Update.</p>	<p>High</p>	<p>SCDEM, New Jersey Department of Community Affairs, State Planning Commission, municipal building inspectors, zoning boards</p>	<p>Ongoing</p>	<p>Existing resources</p>	<p>Guides communities in a more effective control and use of floodplains.</p>
<p>Objective 3.E: Provide for user-friendly hazard-data accessibility for mitigation and other planning efforts and for private citizens.</p>	<p>3.E.1: Develop a simple GIS platform, or build upon an existing platform, to maintain and analyze critical facilities inventories and information about hazards.</p>	<p>High</p>	<p>SCDEM working with neighboring counties</p>	<p>One-Two Years</p>	<p>Existing staff and resources</p>	<p>Provides a basis for understanding risks and maintaining most current information; provides a good means of maintaining data needed for periodic updates to the hazard mitigation plan; and (potentially) helps to identify promising sites mitigation actions and grant proposals.</p>

GOAL 3: Improve CAPABILITIES, COORDINATION, AND OPPORTUNITIES at municipal and county levels to plan and implement hazard mitigation projects, programs, and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
Objective 3.F: Provide direct support, where possible, to municipal mitigation programs.	3.F.1: Explore potential for possible regionalization or consolidation of hazard mitigation planning, administration, and/or implementation at the county level.	High	SCDEM	Three Years	Existing staff and resources	This could help support, coordinate, and consolidate hazard mitigation capabilities.
	3.F.2: Increase understanding of the capabilities of municipal mitigation programs by continuing to encourage local coordinators to participate in the Municipal Capabilities Assessment Survey.	Medium	SCDEM	Ongoing	SCDEM, staff time	Better understand local planning and implementation capabilities; provide a baseline for future capabilities assessments.
Objective 3.G: Provide opportunities for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the plan update process	3.G.1: Provide regular summaries to neighboring communities re: plan monitoring and update procedures (as outlined in Section 7) and post updates on Sussex County’s website for public access to the plan update process.	High	SCDEM	On-going	Existing resources and staff	This will help Sussex County meet plan update requirements as well as provide a mechanism for identifying possible cooperative efforts for neighboring communities.

GOAL 4: Pursue **OPPORTUNITIES TO MITIGATE** repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
Objective 4.A: Facilitate development and timely submittal of project applications meeting state and federal guidelines for funding (1) for RL and SRL properties and (2) for hardening/retrofitting infrastructure and critical facilities with highest vulnerability ratings.	4.A.1: Coordinate with state efforts to develop and implement a detailed severe repetitive loss mitigation strategy that will qualify the county and municipalities for 90:10 cost share under the FEMA SRL program.	High	SCDEM, NJOEM	Immediate and ongoing	Existing local, state, and federal funding programs.	Protects, people, property, and response assets while removing high cost structures from the NFIP.
	4.A.2: Continue working with local and regional jurisdictions to encourage and support their efforts to mitigate RL (and SRL) properties, either individually through the use of cluster solutions and/or basin projects, as appropriate, and offer technical support in carrying out the requirements of FEMA mitigation programs. (see Table 6.3.3-1 for further detail).	High	SCDEM, NJOEM	Ongoing	Federal grants, Green Acres, other open space funds	Initiates a long-term process to protect property from effects of repetitive flooding.
	4.A.3: Implement mitigation projects and programs intended to reduce risk to critical facilities (see Table 6.3.3-1 for further detail).	High	SCDEM and municipal OEM Coordinators	Ongoing	Federal grants, other state and local sources	Reduces exposure and risk to critical facilities.

GOAL 4: Pursue **OPPORTUNITIES TO MITIGATE** repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	4.A.4: Implement other mitigation projects and programs as appropriate at the municipal level (see Table 6.3.3-1 for further detail).	High	SCDEM and municipal OEM Coordinators	Ongoing	Federal grants, other state and local sources	Varied
	4.A.5: Promote acquisition and elevation of repetitive loss and severe repetitive loss structures (see Table 6.3.3-1 for further detail).	High	SCDEM, NJOEM	Ongoing	Federal grants	To eliminate repetitive loss structures
	4.A.6: Work with NJGS and other County, State and federal agencies to better identify specific sites in the County that may be exposed to the effects of geo-hazards such as landslides, sinkholes and subsidence.	High	SCDEM, NJDEP, NJGS	Ongoing	Existing Resources and Federal grant funds	Although risk does not appear to be particularly high from these hazards, there remains a need to better understand the hazards on a site-specific basis. Studies will be used as the basis for developing additional actions and strategies to mitigate risk, particularly when critical facilities are at risk.
Objective 4.B: Maintain and enhance local regulatory standards related to future development and investments.	4.B.1: Ensure full and effective enforcement of building codes, floodplain management, zoning, and other risk-reducing regulations.	High	SCDEM, municipal OEMs and local permitting and planning offices	Ongoing	Existing County and Local Resources	Advances all goals in the plan by ensuring effectiveness of existing local tools

GOAL 4: Pursue **OPPORTUNITIES TO MITIGATE** repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs and activities

Objective	Action	Priority	Responsible Agency	Projected Timeline	Projected Resources	Rationale for Action and Priority
	4.B.2: Integrate hazard mitigation priorities into Capital Improvement Plans, transportation planning, and other capital planning.	High	SCDEM, municipal OEMs and local permitting and planning offices	Ongoing	Existing County and Local Resources	Advances all goals in the plan by ensuring consistency of major investments with mitigation priorities
	4.B.3: Integrate hazard mitigation Plan and priorities into floodplain management, zoning, subdivision regulation, and other local regulations as appropriate.	High	SCDEM, municipal OEMs and local permitting and planning offices	Ongoing	Existing County and Local Resources	Implements all goals by mitigating risk to new construction on a jurisdiction-wide basis

Notes:

- (1) Priority rankings were developed by SCDEM. See Appendix D and Table D-1 for details of STAPLEE analysis of these mitigation actions.
- (2) In all of the action items in Table 6.4-1, SCDEM is indicated as one of the responsible agencies. In addition, there are several references to local agencies as responsible parties as well. One of the main roles of SCDEM in these actions - and in general regarding hazard mitigation planning and implementation - is support and facilitation of efforts to be encouraged at the local level. In some cases, municipalities have identified parallel action items (for example, County Action 1.A.1). In those situations, a specific relationship can be described and pursued as joint efforts. However, for most of these actions, the working relationships and specific responsibilities of SCDEM and the participating jurisdictions will need to be developed over time as part of the implementation of each action. It is envisioned that during the five-year period, SCDEM will be able to define workable programs with the municipalities on an on-going basis to better define these implementation strategies and keep workloads within the limits of county and local capabilities.

6.5 Municipality-Specific Mitigation Actions

Strategies for hazard mitigation within Sussex County and the municipalities were identified to reduce damage to those areas and conform to the requirements of the Interim Final Rule (IFR). The following indicates the specific mitigation actions on a community by community basis including the rankings assigned to the projects by the municipalities.

Each participating municipality in Sussex County identified mitigation actions and programs based upon the risk assessment (Section 4) and capabilities assessment (Section 5). These are detailed below in Table 6.5-1. In all cases, these actions support Goal 4, i.e., pursue opportunities to mitigate repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs, and activities.

Table 6.5-1: Municipality Specific Mitigation Actions

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
SUSSEX COUNTY DEPARTMENT OF ENGINEERING								
County Engineering 1: Hydrology study for flow impact at Vernon Crossing Bridge in support of potential new bridge.	Flood	Existing	Emergency Management	County Engineer	One-two Years	\$85,000	FMA,PDM-C & HMGP if available	High
County Engineering 2: Hydrology study of Neldon's Brook located at County Road 622 and Bridge S-25.	Flood	Existing	Emergency Management	County Engineer	One-two Years	\$95,000	FMA,PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
SUSSEX COUNTY FACILITIES								
County Facilities 1: Retrofit roof to meet current standards for snow load on County Department of Public Works building located on Route 206.	Severe Winter Weather	Existing	Emergency Management	Director of Public Works	One Year	\$95,000	PDM-C & HMGP if available	High
County Facilities 2: Retrofit roof to meet current standards for snow load of original section of County Public Safety Training Academy located on Morris Turnpike.	Severe Winter Weather	Existing	Emergency Management	County Facilities Director	One Year	\$110,000	PDM-C & HMGP if available	High
County Facilities 3: Retrofit roof to meet current standards for snow load of the original Homestead Healthcare Facility building located on Morris Turnpike.	Severe Winter Weather	Existing	Emergency Management	County Facilities Director	One Year	\$100,000	PDM-C & HMGP if available	High
ANDOVER BOROUGH								
Andover Borough 1: Retrofit roof to meet current standards for snow load on Andover Borough Fire Department building located on Route 206.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One Year	\$85,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Andover Borough 2: Install 300 yards of berm on Kymer Brooke to protect Andover Borough Fire Department located on Route 206.	Flood	Existing	Emergency Management	Department of Public Works Supervisor	One-two Years	\$350,000	NJDEP USACE HMGP if available	Medium
Andover Borough 3: Install retention basin on Washer Farm.	Flood	Existing	Emergency Management	OEM Coordinator	One-two Years	\$85,000	PDM-C, FMA & HMGP if available	High
Andover Borough 4: Storm-water runoff management to re-direct runoff from Route 206 near Whitehall Road to a retention basin.	Flood	Existing	Emergency Management	OEM Coordinator	One Year	\$200,000	PDM-C, FMA & HMGP if available	High
Andover Borough 5: Emergency generator for municipal water system facility located on Lenape Road.	All	Existing	Emergency Management	OEM Coordinator	One Year	\$95,000	HMGP 5% Initiative	Medium
Andover Borough 6: Retrofit roof to meet current standards for snow load on municipal building located on Main Street.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One Year	\$95,000	PDM-C & HMGP if available	High
Andover Borough 7: Implement Fire Wise Program throughout the Borough.	Wildfire	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Andover Borough 8: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
ANDOVER TOWNSHIP								
Andover Township 1: Elevation of flood prone property located on Stickles Pond Road.	Flood	Existing	Emergency Management	OEM Coordinator	One-two Years	\$250,000	FMA, PDM-C & HMGP if available	High
Andover Township 2: Elevation of flood prone property located on Limecrest Road.	Flood	Existing	Emergency Management	OEM Coordinator	One-two Years	\$280,000	FMA, PDM-C & HMGP if available	High
Andover Township 3: Implementation of Fire Wise community program.	Wildfire	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Andover Township 4: Upgrade of roof to current snow load and high wind standards of Long Pond School located on Limecrest Road.	Severe Winter Weather, Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$95,000	PDM-C & HMGP if available	High
Andover Township 5: Upgrade of roof to current snow load and high wind standards of Florence Burd School located on Newton-Sparta Road.	Severe Winter Weather, Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$80,000	PDM-C & HMGP if available	High
Andover Township 6: Inundation study for Hidden Valley Lake Dam located on Bonnie Glen Court.	Flood	Existing	Emergency Management	Township Engineer	One Year	\$65,000	FMA, PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Andover Township 7: Inundation study for Lake Lenape Dam located on Old Creamery Road.	Flood	Existing	Emergency Management	Township Engineer	One Year	\$65,000	FMA, PDM-C & HMGP if available	High
Andover Township 8: Storm-water retention basin addition to Hemlock Avenue and Old Creamery Road.	Flood	Existing	Emergency Management	Township Engineer	One Year	\$65,000	FMA, PDM-C & HMGP if available	High
Andover Township 9: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
BRANCHVILLE BOROUGH								
Branchville Borough 1: Implementation of Fire Wise Program throughout the Borough.	All	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Branchville Borough 2: Raise embankments along 40 feet of the Culver Brook near Milk Street.	Flood	Existing	Emergency Management	Borough Engineer	One Year	\$250,000	PDM-C & HMGP if available	Medium
Branchville Borough 3: Raise embankments along 70 feet of the Dry Brook near Township Baseball Field.	Flood	Existing	Emergency Management	Borough Engineer	One Year	\$450,000	PDM-C & HMGP if available	Medium
Branchville Borough 4: Armoring and bank stabilization for Small Pond Dam located on Wantage Avenue.	Flood	Existing	Emergency Management	Borough Engineer	One Year	\$665,000	PDM-C & HMGP if available	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Branchville Borough 5: Flood-proofing of the Little Children's World School building.	Flood	Existing	Emergency Management	Facility Administrator	One-two Years	\$95,000	PDM-C, FMA & HMGP if available	High
Branchville Borough 6: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
BYRAM TOWNSHIP								
Byram Township 1: Acquisition/ Elevation, of one Repetitive Loss property on Lackawanna Drive.	Flood	Existing	Floodplain Management	OEM Coordinator	One-two Years	\$300,000	FMA, PDM-C & HMGP if available	High
Byram Township 2: Retrofit roof to meet current high wind standards on Byram Township Lackawanna Fire Department building located on Lackawanna Drive.	Straight Line Winds	Existing	Emergency Management	Station Commander	One-two Years	\$85,000	PDM-C & HMGP if available	High
Byram Township 3: Retrofit roof to meet current snow load standards on Byram Township Fire Department Cranberry Lake building located on Route 206.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One-two Years	\$95,000	PDM-C & HMGP if available	High
Byram Township 4: Backup generator for shelter at Byram Township Fire Department Cranberry Lake located on Route 206.	All	Existing	Emergency Management	Township Manager	One-two Years	\$80,000	HMGP 5% Initiative	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Byram Township 5: Retro fit roof to meet current snow load and high wind standards on Byram Civic Center located on Mansfield Drive.	Severe Winter Weather & Straight Line Winds	Existing	Emergency Management	Township Manager	One-two Years	\$80,000	PDM-C & HMGP if available	High
Byram Township 6: Retro fit roof to meet current snow load standards on Byram Municipal Building located on Mansfield Drive.	Severe Winter Weather	Existing	Emergency Management	Township Manager	One-two Years	\$90,000	PDM-C & HMGP if available	High
Byram Township 7: Flood proofing two pump stations located on Mansfield Drive.	Flood	Existing	Emergency Management	Township Administrator	One year	\$350,000	PDM-C & HMGP if available	High
Byram Township 8: Harden Lee Hill Road Emergency Medical Services Station located on Lee Hill Road to FEMA 361 Standards.	Straight Line Winds	Existing	Emergency Management	Station Commander	One-two Years	\$85,000	PDM-C & HMGP if available	High
Byram Township 9: Retro fit roof to meet current snow load standards on Intermediate School located on Mansfield Drive.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One-two Years	\$95,000	PDM-C & HMGP if available	High
Byram Township 10: Upgrade and improve culverts on Little Paint Way.	Flood	Existing	Emergency Management	Department of Public Works Supervisor	One-two Years	\$75,000	PDM-C, FMA & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Byram Township 11: Lackawanna Dam inundation study.	Flood	Existing	Emergency Management	Byram Township, Lake Lackawanna Investment Corp.	One Year	\$85,000	PDM-C, FMA & HMGP if available	High
Byram Township 12: Forrest Lakes Dam analysis and inundation study.	Flood	Existing	Emergency Management	Township Engineer	One Year	\$85,000	PDM-C, FMA & HMGP if available	High
Byram Township 13: Implementation of Fire Wise program in township.	Wild Fire	Existing	Emergency Management	Township Engineer	One Year	Staff Time	NJDEP Parks and Forestry	High
Byram Township 14: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
FRANKFORD TOWNSHIP								
Frankford Township 1: Backup generator for Frankford Township Volunteer Fire Department 1 located on US Highway 206. Facility is used as a shelter and backup Emergency Operations Center.	All	Existing	Emergency Management	Station Commander	One-two Years	\$125,000	HMGP 5% Initiative	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Frankford Township 2: Upgrade and improvement of culverts on access road to Culver Lake Fire Tower located on the top of Sunrise Mountain.	Flood	Existing	Emergency Management	Department of Public Works Supervisor	One-two Years	\$245,000	PDM-C & HMGP if available	High
Frankford Township 3: Backup generator for Culver Lake Fire Tower located on the top of Sunrise Mountain.	All	Existing	Emergency Management	Station Commander	One-two Years	\$125,000	HMGP 5% Initiative	Medium
Frankford Township 4: Backup generator for Municipal Offices and Court located on US Highway 206. Facility is primary Emergency Operations Center.	All	Existing	Emergency Management	Department of Public Works Supervisor	One-two Years	\$125,000	HMGP 5% Initiative	Medium
Frankford Township 5: Provide backup generator for the Administration Building at the Sussex County Fair Site located on Plains Road. This facility also serves as an EMS site and a Primary Point of Distribution for both medical and commodities supplies.	All	Existing	Emergency Management	DPW Administrator	One-two Years	\$125,000	HMGP 5% initiative	Medium
Frankford Township 6: Provide an all hazard public education outreach program on mitigation related issues.	All	New	Emergency Management	OEM Coordinator	Annual	Staff Time	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Frankford Township 7: Mountain Snowmelt and Rain Runoff Analysis for the area of Upper North Shore to Lower North Shore at the water edge of Culver Lake, from Sunkin Road to New Street.	Flood	Existing	Emergency Management	Township Engineer	One Year	\$1,000,000	PDM-C & HMGP if available	High
Frankford Township 8: Installation of a storm warning system for severe weather affecting the Sussex County Fairgrounds on Plains Road.	High Winds	Existing	Emergency Management	OEM Coordinator	One Year	\$300,000	PDM-C & HMGP if available	High
Frankford Township 9: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
FRANKLIN BOROUGH								
Franklin Borough 1: Retrofit roof to meet current snow load standards on Franklin Fire Department building located on Buckwheat Road.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One-two Years	\$100,000	PDM-C & HMGP if available	High
Franklin Borough 2: Back-up generator for the Municipal Building located on Main Street.	All	Existing	Emergency Management	OEM Coordinator	One-two Years	\$125,000	HMGP 5% initiative	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Franklin Borough 3: Construction of retention pond and culverts to eliminate storm water run-off flooding on Route 23 between Franklin Avenue and Rutherford Avenue.	Flood	Existing	Emergency Management	Borough Engineer	One-two Years	\$150,000	PDM-C & HMGP if available	High
Franklin Borough 4: Storm-water management system upgrade and improvement along Newton Street off County Route 631.	Flood	New	Emergency Management	Borough Engineer	One-two Years	\$350,000	PDM-C & HMGP if available	High
Franklin Borough 5: Flood-proofing of the Immaculate Conception Regional School.	Flood	Existing	Emergency Management	Facility Administrator	One-two Years	\$150,000	PDM-C, FMA & HMGP if available	High
Franklin Borough 6: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
FREDON TOWNSHIP								
Fredon Township 1: Harden Fredon Town Hall/Department of Public Works located on 94S to FEMA 361 Standards.	Straight Line Winds	Existing	Emergency Management	OEM Coordinator	One-two Years	\$100,000	PDM-C & HMGP if available	High
Fredon Township 2: Retrofit roof to meet current high wind standards on school located on Route 94S.	Severe Winter Weather &	Existing	Emergency Management	School Board Administrator	One-two Years	\$125,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Fredon Township 3: Retrofit impact resistant windows and shutters to school located on Route 94S.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One–two Years	\$95,000	PDM-C & HMGP if available	High
Fredon Township 4: Emergency generator for school shelter located on Route 94S.	All	Existing	Emergency Management	School Board Administrator	One–two Years	\$95,000	HMGP 5% Initiative	Medium
Fredon Township 5: Implement Fire Wise prevention program throughout municipality.	Wildfire	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJ Forest Fire Service	High
Fredon Township 6: Inundation Study for twin dams located on Warner Road and Paulinskill Lake Road.	Flood	Existing	Emergency Management	Township Engineer	Two–three Years	\$150,000	NJDEP, PDM-C & HMGP if available	High
Fredon Township 7: Emergency generator for shelter at Civic Center.	All	Existing	Emergency Management	OEM Coordinator	One–two Years	\$125,000	HMGP 5% Initiative	Medium
Fredon Township 8: Inundation study for Whittemore Pond Dam.	Flood	Existing	Emergency Management	Township Engineer	One Year	\$100,000	NJDEP, FMA, PDM-C & HMGP if available	High
Fredon Township 9: Upgrade and improve storm-water culverts at intersection of Pond Place and Slate Ridge.	Flood	Existing	Emergency Management	Township Engineer	One–two Years	\$85,000	PDM-C & HMGP if available	High
Fredon Township 10: Install storm water runoff retention basin located at Newton Memorial Hospital.	Flood	Existing	Emergency Management	Hospital Administrator	One–two Years	\$ 250,000	FMA, PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Fredon Township 11: Retrofit roof to meet current snow-load standards on Civic Center/Emergency Services Center on 94S.	Straight Line Winds	Existing	Emergency Management	Facility Administrator	One-two Years	\$150,000	PDM-C & HMGP if available	High
Fredon Township 12: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
GREEN TOWNSHIP								
Green Township 1: Retrofit roof to meet current high wind standards on Green Hills School located on Mackerly Road.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$85,000	PDM-C & HMGP if available	High
Green Township 2: Implement Fire Wise Program throughout the township.	All	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Green Township 3: Stream bank stabilization and augmentation of the Pequest River.	Flood	Existing	Emergency Management	Township Engineer	One-two Years	\$975,000	PDM-C & HMGP if available	Medium
Green Township 4: Retrofit impact resistant windows and shutters on municipal building located on Kennedy Road.	Straight Line Winds	Existing	Emergency Management	Department of Public Works Administrator	One-two Years	\$85,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Green Township 5: Retrofit an external -frame to mitigate straight line winds to post office building located on Municipal Road.	Straight Line Winds	Existing	Emergency Management	Township Administrator	One-two Years	\$130,000	PDM-C & HMGP if available	High
Green Township 6: Retrofit roof to meet current high wind standards for two buildings located on the Trinca Airport located on Airport Road.	Straight Line Winds	Existing	Emergency Management	Township Administrator	One-two Years	\$170,000	PDM-C & HMGP if available	High
Green Township 7: Storm-water runoff management system implemented for 350 homes in the Lake Tranquility development.	Flood	Existing	Emergency Management	Department of Public Works Administrator	Two Years	\$2,000,000	PDM-C & HMGP if available	High
Green Township 8: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
HAMBURG BOROUGH								
Hamburg Borough 1: Backup generator for shelter at Hamburg Elementary School located on Linwood Avenue.	All	Existing	Emergency Management	OEM Coordinator	One-two Years	\$125,000	HMGP 5% Initiative	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Hamburg Borough 2: Retrofit roof to meet current snow load standards on Hamburg Elementary School located on Linwood Avenue.	Severe Winter Weather	Existing	Emergency Management	School Administrator	Two-three Years	\$500,000	PDM-C & HMGP if available	High
Hamburg Borough 3: Flood-proofing of the Hamburg Fire Company building.	Flood	Existing	Emergency Management	Municipal Fire Chief	One-two Years	\$100,000	PDM-C, FMA & HMGP if available	High
Hamburg Borough 4: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
HAMPTON TOWNSHIP								
Hampton Township 1: Retrofit roof to meet current snow load standards on Department of Public Works facility located on Rumsey Way.	Severe Winter Weather	Existing	Emergency Management	Department of Public Works Supervisor	One-two Years	\$95,000	PDM-C & HMGP if available	High
Hampton Township 2: Implement Fire Wise program throughout Township.	Wild Fire	Existing	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Hampton Township 3: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
HARDYSTON TOWNSHIP								
Hardyston Township 1: Implement Fire Wise Program throughout Township.	Wildfire	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Hardyston Township 2: Flood proofing of the Fire Company #1 and First Aid squad buildings located on Colson Terrace.	Flood	Existing	Emergency Management	Township Engineer	One Year	\$265,000	PDM-C & HMGP if available	High
Hardyston Township 3: Storm-water management study to correct storm drainage system located on Colson Terrace.	Flood	Existing	Emergency Management	Department of Public Works Supervisor	One Year	\$65,000	FMA, PDM-C & HMGP if available	High
Hardyston Township 4: Retrofit roof to meet current snow load standards at the Elementary School.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	Two Years	\$90,000	PDM-C & HMGP if available	High
Hardyston Township 5: Retrofit Elementary School gymnasium windows with impact resistant glass and shutters.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	Two Years	\$85,000	PDM-C & HMGP if available	High
Hardyston Township 6: Retrofit South West side of municipal building with impact resistant windows and shutters.	Straight Line Winds	Existing	Emergency Management	Township Manager	Two Years	\$85,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Hardyston Township 7: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
HOPATCONG BOROUGH								
Hopatcong Township 1: Retrofit roof, windows and doors to meet current high wind standards on Hudson Maxim School located on River Styx Road.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$85,000	PDM-C & HMGP if available	High
Hopatcong Township 2: Retrofit roof to meet current snow load standards on Hopatcong Municipal Facility located on River Styx Road.	Severe Winter Weather	Existing	Emergency Management	Township Administrator	One-two Years	\$150,000	PDM-C & HMGP if available	High
Hopatcong Township 3: Harden shelter Hopatcong High School to FEMA 361 Standards.	Straight Line Winds	Existing	Floodplain Management Plan	School Administrator	Two Years	\$125,000	HMGP, PDM	High
Hopatcong Township 4: Backup generator for Hopatcong Fire Company #4 located on Jefferson Trail. Serves as a shelter/reception center.	All	Existing	Emergency Management	Station Commander	One Year	\$95,000	HMGP 5% Initiative	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Hopatcong Township 5: Backup generator for Hopatcong Fire Department #3 located on Hopatchung Road. Serves as a shelter/reception center.	All	Existing	Emergency Management	Station Commander	One Year	\$95,000	HMGP 5% Initiative	Medium
Hopatcong Township 6: Storm-water management system upgrade and improvement to alleviate flooding between Durban Ave and Wills Ave.	Flood	Existing	Emergency Management	Municipal Engineer	One-two Years	\$250,000	PDM-C & HMGP if available	High
Hopatcong Township 7: Harden shelter at Civic Center located on Lakeside Blvd to FEMA 361 Standards.	Straight Line Winds	Existing	Floodplain Management Plan	Facility Administrator	Two Years	\$200,000	PDM-C & HMGP if available	High
Hopatcong Township 8: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
LAFAYETTE TOWNSHIP								
Lafayette Township 1: Retrofit roof to meet current snow load standards on the Lafayette Fire Company building located on Route 15 North.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One Year	\$200,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Lafayette Township 2: Retrofit roof to meet current snow load standards on Lafayette Department of Public Works Garage and Emergency Medical Services located on Morris Farm Road.	Severe Winter Weather	Existing	Emergency Management	Director of Public Works	One–two Years	\$250,000	PDM-C & HMGP if available	High
Lafayette Township 3: Retrofit roof to meet current snow load standards of Lafayette Township Elementary School located on Beaver Run Road.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One–two Years	\$95,000	PDM-C & HMGP if available	High
Lafayette Township 4: Retrofit Lafayette Township Elementary School with impact resistant windows and shutters. Located on Beaver Run Road.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One–two Years	\$75,000	PDM-C & HMGP if available	High
Lafayette Township 5: Retrofit Lafayette Federated Church (shelter) with impact resistant windows and shutters. Located on Route 15.	Straight Line Winds	Existing	Emergency Management	Facility Administrator	One–two Years	\$65,000	PDM-C & HMGP if available	High
Lafayette Township 6: Implement Fire Wise Program throughout the Township.	All	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Lafayette Township 7: Construct a storm-water runoff management system for Dennis Road and Pellettown Road.	Flood	Existing	Emergency Management	Director of Public Works	One Year	\$300,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Lafayette Township 8: Culvert upgrade and improvement along Decker Road and Snover Road.	Flood	Existing	Emergency Management	Director of Public Works	One Year	\$250,000	PDM-C & HMGP if available	High
Lafayette Township 9: Storm-water management system upgrade and improvement along Beaver Run Road.	Flood	Existing	Emergency Management	OEM Coordinator	One Year	\$275,000	FMA, PDM-C & HMGP if available	High
Lafayette Township 10: Storm-water management system upgrade and improvement along Meadows Road.	Flood	Existing	Emergency Management	OEM Coordinator	One Year	\$375,000	FMA, PDM-C & HMGP if available	High
Lafayette Township 11: Flood-proofing of the Emergency Medical Service and Fire Company building.	Flood	Existing	Emergency Management	Municipal Fire Chief	One-two Years	\$100,000	PDM-C, FMA & HMGP if available	High
Lafayette Township 12: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
MONTAGUE TOWNSHIP								
Montague Township 1: Acquisition/ Elevation of two Repetitive Loss properties on River Road.	Flood	Existing	Floodplain Management	OEM Coordinator	One-two Years	\$150,000	FMA, PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Montague Township 2: Retrofit roof to current standards for snow load on Montague Fire Department building located on Clove Road.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One Year	\$65,000	PDM-C & HMGP if available	High
Montague Township 3: Retrofit roof to current standards for high winds on Montague Fire Department building located on Clove Road.	Straight Line Winds	Existing	Emergency Management	Station Commander	One Year	\$85,000	PDM-C & HMGP if available	High
Montague Township 4: Retrofit roof to current standards for high winds on Montague Elementary School (shelter) located on Route 206.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$125,000	PDM-C & HMGP if available	High
Montague Township 5: Retrofit roof to current standards for snow load on Montague Elementary School (shelter) located on Route 206.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One-two Years	\$100,000	PDM-C & HMGP if available	High
Montague Township 6: Backup generator for Montague Elementary School (shelter) located on Route 206.	All	Existing	Emergency Management	OEM Coordinator	One-two Years	\$100,000	HMGP 5% Initiative	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Montague Township 7: Retrofit roof to current standards for snow load on Montague Department of Public Works building located on Weider Road.	Severe Winter Weather	Existing	Emergency Management	Department of Public Works Administrator	One–two Years	\$95,000	PDM-C & HMGP if available	High
Montague Township 8: Retrofit roof to current standards for high winds on Montague Department of Public Works building located on Weider Road.	Straight Line Winds	Existing	Emergency Management	Department of Public Works Administrator	One–two Years	\$95,000	PDM-C & HMGP if available	High
Montague Township 9: Retrofit municipal building with impact resistant windows and shutters located on Clove Road.	Straight Line Winds	Existing	Emergency Management	Municipal Engineer	Two Years	\$65,000	PDM-C & HMGP if available	High
Montague Township 10: Implementation of the Fire Wise Program throughout the township.	Wildfire	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Montague Township 11: Warning system installation along flood areas on River Road.	Flood	Existing	Floodplain Management	OEM Coordinator	One Year	\$50,000	FMA, PDM-C & HMGP if available	High
Montague Township 12: Elevate river banks for a half mile along the Delaware and Benekill Rivers.	Flood	Existing	Floodplain Management	Township Engineer	One–three Years	\$850,000	NJDEP, USACE, FMA, PDM-C & HMGP if available	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Montague Township 10: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
NEWTON TOWN								
Newton Town 1: Retrofit roof to meet current standards for high winds on Halstead School located on Halstead Street.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$95,000	PDM-C & HMGP if available	High
Newton Town 2: Retrofit oldest portion of building with impact resistant windows of Newton Memorial Hospital located on High Street.	Straight Line Winds	Existing	Emergency Management	Memorial Hospital Administrator	One Year	\$125,000	PDM-C & HMGP if available	High
Newton Town 3: Retrofit roof to meet current standards for snow load on two sections of Newton Memorial Hospital located on High Street.	Severe Winter Weather	Existing	Emergency Management	Memorial Hospital Administrator	One-two Years	\$100,000	PDM-C & HMGP if available	High
Newton Town 4: Retrofit roof to meet current standards for high winds on Newton High School located on Ryerson Avenue.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$85,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Newton Town 5: Retrofit roof to meet current standards for snow load on school located on Miriam Avenue.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One–two Years	\$75,000	PDM-C & HMGP if available	High
Newton Town 6: Retrofit roof section over vehicle bays to meet current standards for snow load of Newton First Aid Squad 65 located on Sussex Street.	Severe Winter Weather	Existing	Emergency Management	First Aid Squad Administrator	One–two Years	\$45,000	PDM-C & HMGP if available	High
Newton Town 7: Implementation of Fire Wise Program throughout township.	Wildfire	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Newton Town 8: Install armoring on Dam #4 located on Sussex County College property.	Flood	Existing	Emergency Management	Township Engineer	One–two Years	\$500,000	PDM-C & HMGP if available	Medium
Newton Town 9: Install armoring of Dam #2 located on Swartswood Road.	Flood	Existing	Emergency Management	Township Engineer	One–two Years	\$250,000	PDM-C & HMGP if available	Medium
Newton Town 10: Conduct inundation study for Morris Lake Dam located on Morris Lake Road.	Flood	Existing	Emergency Management	Township Engineer	One–two Years	\$75,000	PDM-C, FMA & HMGP if available	High
Newton Town 11: Upgrade capacity of Merriam Avenue School Storm-water Pump Facility.	Flood	Existing	Emergency Management	Department of Public Works Administrator	Two Years	\$250,000	PDM-C, FMA & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Newton Town 12: Retrofit roof to meet current standards for high winds on Newton Municipal Building located on Trinity Street.	Straight Line Winds	Existing	Emergency Management	Town Manager	One-two Years	\$85,000	PDM-C & HMGP if available	High
Newton Town 13: Retrofit roof to meet current standards for snow load on Fire House #1 located on Mill Street.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One-two Years	\$85,000	PDM-C & HMGP if available	High
Newton Town 14: Retrofit roof to meet current standards for snow load of Fire House #2 located on Woodside Avenue.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One-two Years	\$75,000	PDM-C & HMGP if available	High
Newton Town 15: Storm-water management system upgrade and improvement access way to DPW Garage located on Moran Street.	Flood	Existing	Emergency Management	Department of Public Works Administrator	One-two Years	\$65,000	PDM-C & HMGP if available	High
Newton Town 16: Retrofit roof to meet current standards for snow load of one waste water treatment plant located on Townsend Street.	Severe Winter Weather	Existing	Emergency Management	Deputy Town Manager	One-two Years	\$75,000	PDM-C & HMGP if available	High
Newton Town 17: Retrofit two buildings with impact resistant windows and shutters at the Sussex County Community College	Straight Line Winds	Existing	Emergency Management	College Administrator	One-two Years	\$250,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Newton Town 18: Retrofit two buildings to meet current snow load standards at the Sussex County Community College.	Severe Winter Weather	Existing	Emergency Management	College Administrator	One-two Years	\$850,000	PDM-C & HMGP if available	High
Newton Town 19: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
OGDENSBURG BOROUGH								
Ogdensburg Borough 1: Acquisition / elevation of one Repetitive Loss property located on Richardsville Road.	Flood	Existing	Emergency Management	OEM Coordinator	One-two Years	\$250,000	FMA, PDM-C, HMGP if available	High
Ogdensburg Borough 2: Retrofit roof to meet current snow load standards for Ogdensburg Elementary School located 100 Main Street.	Winter Storm	Existing	Emergency Management	School Administration	One-two Years	\$100,000	PDM-C & HMGP if available	High
Ogdensburg Borough 3: Backup generator for Ogdensburg Elementary School located 100 Main Street. Facility utilized as a shelter.	All	Existing	Emergency Management	School Administration	One-two Years	\$125,000	HMGP 5% Initiative	Medium
Ogdensburg Borough 4: Dredge Heaters Pond to increase holding capacity.	Flood	Existing	Emergency Management	Department of Public Works Supervisor	One-two Years	\$450,000	NJDEP	Low

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Ogdensburg Borough 5: Backup generator for Ogdensburg Fire Department located on Main Street. Facility utilized as a shelter.	All	Existing	Emergency Management	Station Commander	One-two Years	\$125,000	HMGP 5% Initiative	Medium
Ogdensburg Borough 6: Implement Fire Wise Program throughout the Borough.	Wild Fire	Existing	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Ogdensburg Borough 7: Stream bank stabilization (vegetation addition) on Middle Sawmill Brook from RR tracks to Route 517.	Flood	Existing	Emergency Management	Borough Engineer	One Year	\$100,000	PDM-C & HMGP if available	Medium
Ogdensburg Borough 8: Armoring and bank stabilization on Heaters Pond Dam located at Edison Road.	Flooding	Existing	Emergency Management	Boro Engineer	One-two Years	\$600,000	PDM-C & HMGP if available	Medium
Ogdensburg Borough 9: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	PDM-C and HMGP	High
SANDYSTON TOWNSHIP								
Sandyston Township 1: Implement Fire Wise Program throughout the Township.	Wild Fire	Existing	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Sandyston Township 2: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
SPARTA TOWNSHIP								
Sparta Township 1: Emergency generator for shelter located within Sparta Ambulance Service building located on Sparta Avenue.	All	Existing	Emergency Management	OEM Coordinator	One Year	\$125,000	HMGP 5% Initiative	Medium
Sparta Township 2: Harden Sparta Department of Public Works building located on Prices Lane to FEMA 361 Standards.	Straight Line Winds	Existing	Emergency Management	Department of Public Works Administrator	Two Years	\$75,000	PDM-C & HMGP if available	High
Sparta Township 3: Retrofit impact resistant windows and shutters on Germany Flats Pump Facility located on Park Lake Drive.	Straight Line Winds	Existing	Emergency Management	Facility Administrator	One Year	\$65,000	PDM-C & HMGP if available	High
Sparta Township 4: Stream bank stabilization along Sparta Glen Brook (3500 feet).	Flood	Existing	Emergency Management	Township Engineer	One Year	\$250,000	NJDEP, USACE, FMA, PDM-C & HMGP if available	Medium
Sparta Township 5: Stream bank stabilization along Wallkill River at Station Park (1500 feet).	Flood	Existing	Emergency Management	Township Engineer	One Year	\$125,000	NJDEP, USACE, FMA, PDM-C & HMGP if available	Medium
Sparta Township 6: Storm-water management system upgrade and improvement along Hopkins Corner Road and Valley Manner Drive.	Flood	Existing	Emergency Management	OEM Coordinator	One Year	\$375,000	FMA, PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Sparta Township 7: Implement Fire Wise Program throughout the Township.	Wild Fire	Existing	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Sparta Township 8: Retrofit impact resistant windows and shutters on two buildings of the Sussex County Technical School.	Straight Line Winds	Existing	Emergency Management	College Administrator	One-two Years	\$350,000	PDM-C & HMGP if available	High
Sparta Township 9: Retrofit two buildings to meet current snow load standards at the Sussex County Technical School.	Severe Winter Weather	Existing	Emergency Management	College Administrator	One-two Years	\$950,000	PDM-C & HMGP if available	High
Sparta Township 10: Flood-proofing of the Sparta High School.	Flood	Existing	Emergency Management	School Board Administrator	One-two Years	\$100,000	PDM-C, FMA & HMGP if available	High
Sparta Township 11: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
STANHOPE BOROUGH								
Stanhope Borough 1: Backup generator for Lenape Valley Regional High School. Facility is utilized as the primary ARC approved Shelter.	All	Existing	Emergency Management	School Administrator	One Year	\$125,000	HMGP 5% Initiative	Medium
Stanhope Borough 2: Flood proofing and elevation of utilities for the Compact Building on Furnace Street.	Flood	Existing	Emergency Management	Facility Administrator	Two-three Years	\$125,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Stanhope Borough 3: Flood-proofing of the Byram Lakes Elementary School.	Flood	Existing	Emergency Management	School Board Administrator	One-two Years	\$95,000	PDM-C, FMA & HMGP if available	High
Stanhope Borough 4: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
STILLWATER TOWNSHIP								
Stillwater Township 1: Retrofit doors and windows to meet FEMA hurricane resistant standards on Stillwater Township School located on Stillwater Road. Older section of building will need more extensive reconstruction.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	Two Years	\$300,000	PDM-C & HMGP if available	High
Stillwater Township 2: Retrofit roof to meet current snow load standards on Swartswood Fire Department Fire Company located on County Route 612.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One-two Years	\$75,000	PDM-C & HMGP if available	High
Stillwater Township 3: Retrofit roof to meet current snow load standards the Stillwater Fire Department located on Stillwater Road.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One-two Years	\$75,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Stillwater Township 4: Stream-bank stabilization along the Paulinskill River at Kohlbocker Road.	Flood	Existing	Emergency Management	Municipal Engineer	Two Years	\$200,000	FMA, PDM-C & HMGP if available	Medium
Stillwater Township 5: Stream-bank stabilization of Neldon's Brook effecting Swartswood Fire Department Fire Company located on County Route 612.	Flood	Existing	Emergency Management	Municipal Engineer	Two Years	\$250,000	FMA, PDM-C & HMGP if available	Medium
Stillwater Township 6: Flood proofing of 2 homes located West End Drive.	Flood	Existing	Emergency Management	Municipal Engineer	One-two Years	\$200,000	PDM-C & HMGP if available	High
Stillwater Township 7: Implement Fire Wise Program throughout the Township.	Wild Fire	Existing	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Stillwater Township 8: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
SUSSEX BOROUGH								
Sussex Borough 1: Stream bank stabilization, rip-wrap instillation surrounding confluence of Clove Brook and Papakating Creek.	Flood	Existing	Emergency Management	Director of Public Works	One Year	\$500,000	FMA, PDM-C & HMGP if available	Medium
Sussex Borough 2: Stream bank stabilization of town reservoir and feeder waterway to water treatment plant.	Flood	Existing	Emergency Management	Director of Public Works	Two Years	\$1,500,000	FMA, PDM-C & HMGP if available	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Sussex Borough 3: Armoring of Lake Rutherford Dam located in High Point State Park.	Flood	Existing	Emergency Management	Director of Public Works	Two Years	\$900,000	FMA, PDM-C & HMGP if available	Medium
Sussex Borough 4: Armoring of Colesville Reservoir Dam located Brink Road.	Flood	Existing	Emergency Management	Director of Public Works	One–two Years	\$800,000	FMA, PDM-C & HMGP if available	Medium
Sussex Borough 5: Retrofit impact resistant windows and shutters on Sussex Fire Department building located on Loomis Avenue.	Straight Line Winds	Existing	Emergency Management	Station Commander	Two Years	\$50,000	PDM-C & HMGP if available	High
Sussex Borough 6: Retrofit impact resistant windows and shutters on Sussex Middle School located on Loomis Avenue	Straight Line Winds	Existing	Emergency Management	School Board Administrator	Two Years	\$125,000	PDM-C & HMGP if available	High
Sussex Borough 7: Retrofit roof to meet current standards for snow load on original section of Sussex middle School located on Loomis Avenue.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One–two Years	\$1,500,000	PDM-C & HMGP if available	High
Sussex Borough 8: Backup generator for shelter at Sussex Christian School located on Unionville Avenue.	All	Existing	Emergency Management	OEM Coordinator	One Year	\$125,000	HMGP 5% Initiative	Medium

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Sussex Borough 9: Backup generator for shelter at Emergency Operations Center located on Main Street.	All	Existing	Emergency Management	OEM Coordinator	One Year	\$125,000	HMGP 5% Initiative	Medium
Sussex Borough 10: Backup generator for shelter at Department of Public Works garage located on Brookside Avenue.	All	Existing	Emergency Management	OEM Coordinator	One Year	\$125,000	HMGP 5% Initiative	Medium
Sussex Borough 11: Implement Fire Wise Program throughout the Borough.	Wild Fire	Existing	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Sussex Borough 12: Flood-proofing of the Sussex Boro Fire Company building.	Flood	Existing	Emergency Management	Municipal Fire Chief	One-two Years	\$950,000	PDM-C, FMA & HMGP if available	High
Sussex Borough 13: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
VERNON TOWNSHIP								
Vernon Township 1: Retrofit roof to meet current snow load standards on Highland Lakes Volunteer Fire Department building located on Canistear Road.	Severe Winter Weather	Existing	Emergency Management	Station Commander	One-two Years	\$85,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Vernon Township 2: Retrofit roof to meet current snow load standards on Vernon Valley Police Department building located on Church Street.	Severe Winter Weather	Existing	Emergency Management	Police Chief	One-two Years	\$90,000	PDM-C & HMGP if available	High
Vernon Township 3: Retrofit roof to meet current snow load standards on Lounsberry Hollow School located on Sammis Road.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One-two Years	\$90,000	PDM-C & HMGP if available	High
Vernon Township 4: Retrofit roof to meet current snow load standards on High School located on Route 565.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One-two Years	\$90,000	PDM-C & HMGP if available	High
Vernon Township 5: Implement the Fire Wise Program throughout the township.	Wild Fire	Existing and New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Vernon Township 6: Retrofit roof to meet current snow load standards on Glen Meadows School located on Sammis Road.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One-two Years	\$90,000	PDM-C & HMGP if available	High
Vernon Township 7: Retrofit roof to meet current high wind standards on Cedar Mountain School located on Sammis Road.	Straight Line Winds	Existing	Emergency Management	School Board Administrator	One-two Years	\$90,000	PDM-C & HMGP if available	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
Vernon Township 8: Retrofit roof to meet current snow load standards on Rolling Hill School located on Sammis Road.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One-two Years	\$90,000	PDM-C & HMGP if available	High
Vernon Township 9: Retrofit roof to meet current snow load standards on Walnut Ridge School located on route 517.	Severe Winter Weather	Existing	Emergency Management	School Board Administrator	One-two Years	\$90,000	PDM-C & HMGP if available	High
Vernon Township 10: Storm-water management system upgrade and improvement along Maple Grange Road and Vernon Crossing Road.	Flood	Existing	Emergency Management	Department of Public Works Administrator	One Year	\$750,000	FMA, PDM-C & HMGP if available	High
Vernon Township 11: Embankment stabilization for Mountain Creek Water Park located on route 94.	Landslide	Existing	Emergency Management	Facility Administrator	One-two Years	\$75,000	PDM-C & HMGP if available	Medium
Vernon Township 12: Storm-water management system along Tenneco Pipeline.	All	Existing	Emergency Management	Department of Public Works Administrator	One Year	\$850,000	PDM-C & HMGP if available	High
Vernon Township 13: Harden SES Americom building located on route 517 and Edsel Drive to FEMA 361 Standards.	Straight Line Winds	Existing	Emergency Management	Facility Administrator	One-two Years	\$80,000	PDM-C & HMGP if available	High
Vernon Township 14: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High

Mitigation Action, Program, or Project	Hazard(s) Addressed	Applies to Existing or New Structures	Existing Local Planning/ Implementation Mechanism	Responsible Party	Target Date / Project Duration	Estimated Cost (\$)	Funding Source	Priority
WALPACK TOWNSHIP								
Walpack Township 1: Acquisition/ Elevation of one Repetitive Loss property on Old Mine Road.	Flood	Existing	Emergency Management	OEM Coordinator	Two Years	\$200,000	FMA, PDM-C & HMGP if available	High
Walpack Township 2: Implement Fire Wise Program throughout the Township.	All	New	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Walpack Township 3: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High
WANTAGE TOWNSHIP								
Wantage Township 1: Storm-water drainage improvement and road elevation on Mudtown Road between Route 23 and Skytop Road.	Flood	Existing	Emergency Management	Municipal Engineer	One-two Years	\$750,000	NJDOT, PDM-C & HMGP if available	High
Wantage Township 2: Implement Fire Wise Program throughout the Township.	Wild Fire	Existing	Emergency Management	OEM Coordinator	One Year	Staff Time	NJDEP Parks and Forestry	High
Wantage Township 3: Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	All	Existing and New	Emergency Management	OEM Coordinator, in coordination with SCDEM	One Year	Staff Time	PDM-C and HMGP	High

Notes:

- (1) Priorities and definitions of eligible projects under FEMA funding programs can change from year to year and disaster to disaster. Where multiple federal funding sources are identified under “Funding Source”, the applicant will need to be aware of when notices of funding availability are published by FEMA and then carefully review to determine if a particular project will be eligible for that specific funding source. In addition, the definition and scope of the project may need to be adjusted to best conform to eligibility guidelines at the time of application
- (2) Entries in the “Funding Source” column with the name of the municipality indicate projects that are not considered as candidates for federal or state funding programs and may be funded by the community. However, none of the funding for these projects is necessarily allocated or appropriated for these projects at this time and funding by the municipalities is subject to the availability of funds in municipal capital improvement and operational budgets. Where federal grant programs such as HMGP or PDM are indicated, this only identifies that the project type is typically eligible for these grant programs; i.e., here is no guarantee that these projects will be funded by these programs. Eligibility requirements for these grants are subject to change and the projects themselves must be scoped, applied for and approved on a case-by-case basis.
- (3) Priority rankings were developed with the participation of the municipalities. See Appendix D, Table D-2 for details of STAPLEE analysis of these mitigation actions.

6.6 Prioritization and Implementation of Mitigation Actions

The preceding sections identify specific actions to achieve identified goals, an appropriate responsible party for each action, a schedule for accomplishment, and suggested funding sources. These tables also indicate an initial prioritization of the actions.

In the case of the countywide actions, priorities were initially determined on a qualitative basis by the HMSC. Action items are feasible and are anticipated to reduce risk. Detailed benefit cost analyses were not performed (see notes below) but general cost effectiveness of the types of actions being considered was taken into account.

In addition, an analysis of these actions was undertaken in a systematic way that is called the *Social, Technical, Administrative, Political, Legal, Economic, and Environmental* (STAPLEE) method. Table 6.6-1 describes the basic steps in the STAPLEE methodology.

Table 6.6-1–STAPLEE Methodology

STAPLEE	Criteria Explanation
S–Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the community’s social and cultural values.
T–Technical	Mitigation actions are technically most effective if they provide long term reduction of losses and have minimal secondary adverse impacts.
A–Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
P–Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
L–Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
E–Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
E–Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with federal, state, and local environmental regulations, and that are consistent with the community’s environmental goals, have mitigation benefits while being environmentally sound.

This method was used by SCDEM to weigh the various criteria for each of the identified county-level mitigation actions including the relative cost-effectiveness as part of the “Economic” criteria. The resulting priority rankings are shown in Tables 6.4-1. The detailed scoring of each action for each criterion is shown in Table D-1 in Appendix D.

For the municipal mitigation actions, initial priorities were set in a similar manner by the Local Coordinators; the mitigation action items with highest priority were generally considered to be the most cost effective and most compatible with the communities’ social and cultural values.

The mitigation actions for the municipalities were also analyzed using the STAPLEE criteria and results reviewed and approved by each of the municipal coordinators. The resulting priority rankings are shown in Table 6.5-1. The detailed scoring of each action for each criterion is shown in Table D-2 in Appendix D.

Per the results of the Capability Assessment in Section 5, of particular concern regarding the effective implementation of mitigation actions and strategies is that there is often little to no staffing available at the local level to devote to hazard mitigation related activities. Staffing, resources, and coordination of effort are at a premium with little chance of significant change to these issues in the foreseeable future. Therefore, the inclusion of any specific action item in this document does not commit the county or municipalities to implementation. Each item will be considered for implementation in terms of the available staff and funding resources on a periodic basis. In addition, certain items may require regulatory changes or other decisions that must be implemented through standard processes, such as changing regulations.

Individual communities will implement identified projects with their own resources as they are able to secure grants and program capital improvement funds. The individual municipalities will generally follow the priorities set in this Plan although variations in funding may alter the specific order. The HMWG will also use the STAPLEE methodology to help them consider and prioritize potential action items for funding applications at that time.

The HMSC determined that it will be appropriate to revisit this STAPLEE analysis when funding is either available or being actively sought, because the qualitative characteristics of certain projects or priorities may shift over time or as a result of changing circumstance. Once funding sources are identified (e.g., via grant announcements from NJOEM or FEMA) the list of mitigation actions will be reviewed to select actions that meet the particular grant criteria. Then, the HMWG will determine priority rankings for the short list of projects. Tentatively, the HMSC and HMWG have defined High, Medium, and Low priorities to be assigned in this process as follows:

- High: Meets five of the seven STAPLEE criteria
- Medium: Meets four of the seven STAPLEE criteria
- Low: Meets three of the seven STAPLEE criteria

Depending on the available grant funding, the HMWG will determine how many of the selected and prioritized projects should be submitted for funding starting with the highest priority projects as determined at the time.

Notes regarding Benefit-Cost Analysis

Per the IFR, communities are required to use benefit cost analysis (BCA) to prioritize projects for implementation. At this stage, the analysis of costs and benefits has been done at a general level as part of the STAPLEE methodology. However, as project funding becomes available, the county and municipalities will undertake a more extensive process.

BCA compares the benefits of mitigation measures to the costs, and is a technique used for evaluating the cost-effectiveness of mitigation measures. FEMA requires a BCA for all mitigation projects that receive FEMA funding.

The HMSC and HMWG discussed the potential costs associated with each type of mitigation measure and decided that any project could be cost effective if its scope were properly tailored to the situation. For example, one of the most effective mitigation measures identified for repetitively flooded structures is elevation. It may not be cost effective to elevate every single repetitively flooded structure in the county, but it certainly would be cost effective to elevate those that cause the largest drain to the NFIP.

After discussing the possible costs of the various mitigation measures, the HMSC and HMWG decided that instead of working on developing a very generic BCA at this time for projects that may not be authorized, they would wait until specific funding sources are identified and available. For example, most municipalities are not financially capable of elevating or acquiring any repetitively flooded structures without federal grant assistance. However, at the time that grants become available (HMGP after disasters or PDM and FMA grants annually), the county will collect detailed information on each structure eligible for receiving funds from the grant program and perform a BCA. The BCA will help rank the structures as part of the STAPLEE process to determine which structure should receive funding first.

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