

VI. Mitigation Strategy

Mitigation Strategies proposed by this plan follow FEMA categories and are consistent with goals outlined in the New York State Hazard Mitigation Program from the New York State Emergency Management Office (SEMO). Based on the analysis performed by the Planning Committee, the moderately low and low ranking hazards were discussed in the report, but only moderately high ranking hazards were profiled completely. Where appropriate however, moderately low and low ranking hazards were included in mitigation planning.

It must be noted that by considering potential actions and assigning responsibilities for the actions, Albany County is not putting agencies “on notice” of various conditions and hazard vulnerability. Rather, the mitigation strategy is a master list of potential projects that each agency could consider for funding opportunities.

According to FEMA, mitigation actions can be grouped into six broad categories, as described below. These categories are used to identify mitigation measures for Albany County.

1. Prevention: Government administrative or regulatory actions or processes that influence construction and land development. These actions also include public activities to reduce hazard losses. Examples include planning decisions and actions, zoning ordinances and local laws (in particular for sensitive areas), building codes, capital improvement programs, open space preservation, and storm water management regulations.

2. Property Protection: Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal of structures from the hazard area. Examples include acquisition, structure elevation, relocation, structural retrofits and barriers such as storm shutters and shatter-resistant glass.

3. Public Education and Awareness: Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

4. Natural Resource Protection: Actions that, in addition to minimizing losses due to hazards, also preserve or restore the functions of natural systems. These actions include erosion and sediment control, stream corridor restoration, watershed management, implementation of best management practices (BMPs), forest and vegetation management, and wetland restoration and preservation.

5. Emergency Services: Actions that protect people and property during and immediately after a disaster or hazard event. Services include hazard threat recognition, warning systems, emergency response services, and protection of critical facilities.

6. Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, seawalls, retaining walls, channel maintenance and safe rooms or shelters.

The goals of mitigation strategy for Albany County are consistent with the goals of New York State. The Goals of the New York State Hazard Mitigation Program are as follows, according to the State Emergency Management Office (SEMO) website. The State goals pertain to the general public, services offered, administration and legislation.

- Promote hazard mitigation awareness and education throughout the State.
- Build a State and local hazard mitigation infrastructure within the State and promote mitigation as the most effective means to reduce future disaster losses.
- Implement, maintain, and update a comprehensive State Multi-Hazard Mitigation Plan.
- Reduce risk to lives and property from frequent natural, technological and human caused disasters. Set priority on hazards that are repetitive and pose severe risk to life and property.
- Promote the implementation of flood mitigation plans and projects in flood prone areas of the State, in accordance with the FMA program.
- Encourage the development and implementation of long-term, cost-effective and environmentally sound mitigation projects at the local level.
- Organize a hazard mitigation outreach and education effort at the State level.
- Promote Hazard Resistant Construction, especially in single family residential buildings throughout the State
- Ensure hurricane safety for the people and infrastructure of southern NY State.
- Ensure earthquake safety for the people, property and infrastructure of NYS.
- Reduce the risks of wildfire and utility failure resulting from damaged trees.
- Reduce the length of utility “downtimes”.
- Ensure adequate administrative support to enable SEMO hazard mitigation staff to meet their goals and objectives in a professional and efficient manner.
- Track, and/or recommend, Federal, State and local legislation related to hazard mitigation.

Goals and Objectives

The goals for hazard mitigation in Albany County are:

- Minimize injury and loss of life from hazards.
- Minimize losses to existing and future structures within hazard areas.
- Protect natural resources, such as open space, drinking water and recreation areas from hazards.
- Protect cultural resources such as historic structures and museums from hazards.
- Provide for Continuity of Government (COG) and Continuity of Operations Program (COOP) during and in the aftermath of disasters in order to ensure that the government continues to function and to minimize negative impacts from events.

The objectives to accomplish these goals are:

- Increase awareness in the Albany County Government for hazards that may occur within the County and put in place measures that will enable the County to continue to operate during and in the aftermath of disasters.
- Increase public awareness of hazards in order to gain participation from the public for hazard mitigation.
- Reduce the impact on the community from storms that cause flooding, damaging winds and ice.
- Reduce the damage caused by fire.
- Reduce the threat of terrorism.
- Reduce the risk of extreme temperatures to the public.
- Reduce the risk of damage from earthquakes.
- Prevent the spread of infestation.
- Reduce the damage from drought.
- Reduce the risk of epidemic in the community.
- Reduce the risk of soil, water and air contamination from petroleum and HAZMAT releases.
- Reduce the risk of utility failure.
- Reduce the risk of a transportation accident.
- Reduce the risk of structural collapse.
- Increase public security and reduce the threat of civil unrest.

The Planning Committee considered a range of actions pertaining to mitigation, given the general strategy and the goals and objectives. The following section lists all the Mitigation Strategies, Actions and Responsibilities received from the committee and the public.

Continuity of Government (COG) Continuity of Operations (COOP)

Continuity of Government (COG) and Continuity of Operations (COOP) are important aspects of hazard mitigation. This means that that the Albany County Government must continue to operate in an efficient and responsive manner during and after disaster events in order to protect life and property and minimize potential for cascading effects. The following is a mitigation strategy for the continuity of government and the continuity of operations.

Mitigation Strategy	Action	Responsibility
Prevention	Perform an inventory and maintain a list of all items, including records that would have to be removed from Municipal Facilities and Municipal Hall of Records if flooding or storm surge is expected to inundate structures. Plan where these items and records would be relocated. Update and test the Municipal Emergency Operation Plan regarding relocation of items and records.	Affected Municipal Departments/Agencies Municipal Emergency Management in conjunction with affected Municipal Departments/Agencies
Property Protection	Wherever possible, retrofit Municipal facilities and municipal facilities within the Municipality to take into consideration potential impact of moderately high hazards (flood/ wind/ fire/ terrorism)	Municipal Offices
Public Education and Awareness	Continue to provide all-hazard information for the general public through the use of Municipal websites and print media	Municipal Offices
Natural Resource Protection	(not applicable)	

Emergency Services	<p>Insure that COOP and COG plans are in place and tested</p> <p>Purchase portable equipment to enable interagency communication between Municipal and external governmental and NGO (non-Governmental Organization) agencies.</p> <p>Purchase a crisis management software package to assist with organizing emergency disaster response in EOC (Emergency Operations center).</p>	<p>Municipal Emergency Management</p> <p>Municipal Emergency Management</p> <p>Municipal Emergency Management</p>
Structural projects	<p>Construct EOC/ OPS (Emergency Operations Center / Operations) center in the event of a severe storm, ice storm, severe winter storm or utility failure, fire or terrorist attack of great proportions.</p> <p>Insure that construction of all new governmental facilities for Municipalities takes in consideration the potential impact of moderately high hazards (flood/ wind/ fire/ terrorism)</p>	<p>Municipal Emergency Management</p> <p>Municipal Emergency Management</p>

Mitigation Strategy

The mitigation strategy presented below includes possible actions items in the categories of prevention, property protection, public awareness, natural resource protection, emergency services and structural projects, where applicable. The agency responsible is also listed for each, with a general estimated cost and time frame provided. It must be noted that actual cost estimates have not been provided because that could only be done accurately after the projects have been designed, engineered or otherwise developed, and that is beyond the scope of the mitigation plan. The terms “marginal” and “significant” are used in the following tables, where “marginal” refers to items that would generally require a modification in municipal operations or the municipal budget, shift in municipal focus, or require an expenditure of less than \$100,000. Actions listed as “significant” designates project that would be a capital expenditure, require separate line-items in the municipal budget, require outside consulting services, or generally would cost more than \$100,000. Time frames provided are either immediate (within the first year), short term (less than 3 years), or long term (more than 3 years).

Mitigation Strategy for Moderately High Ranking Hazards

SEVERE STORM

The mitigation strategy for severe storms is to reduce the impacts from severe thunderstorms, wind storms, hail storms and rain storms, all of which may cause significant damage to structures and cause injuries to people. In addition to damages to buildings and other structures, severe storms could damage buildings and other structures, crops and agricultural products, and impact transportation, including aviation.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Insure the NYS building code is enforced for all construction projects, pre and post disaster, especially with regard to wind speed.	Municipal Code Enforcement	Marginal	Immediate
	Perform a structural review of windload for Municipal buildings and structures.	Albany County Department of General Services and Municipal Offices	Significant	Long Term
	Recommend to other governmental, NGO (Non-governmental Organization) and commercial entities that a structural review of windload be conducted on buildings in Municipalities. This would be especially important for multistory buildings such as the hospitals, court and office buildings.	Municipal Offices	Marginal	Immediate
	Assist critical care facilities such as hospitals and nursing homes that need to shelter-in-place with relocating generators, electrical and computer equipment and "hardening" facility i.e. shatter resistant glazing for windows.	Municipal Emergency Management	Significant	Long Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Create and enforce use limitations for buildings based on structural makeup and vulnerability.	Municipal Offices	Marginal	Short Term
Property Protection	Insure that dead trees and branches near electric service for critical care facilities, Municipal facilities, and along Municipal roads are removed or pruned back to reduce the possibility for interruption of service.	Municipal Departments of Public Works / National Grid, Central Hudson and critical care facilities	Significant	Long Term
Public Education and Awareness	Increase public awareness of storm hazards and how to reduce injury and property damage. Provide outreach for vulnerable populations, such as residents of trailer parks and households where English is a second language.	Municipal Emergency Management	Marginal	Short Term
	Educate the public on the hazards of flooding and benefits of flood insurance	Municipal Emergency Management	Marginal	Short Term
	Creation of hazard information centers	Municipal Emergency Management	Significant	Long Term
	NY State system awareness for emergency management personnel	Municipal Emergency Management	Marginal	Short Term
Natural Resource Protection	(not applicable)			

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Emergency Services	Update and test components of evacuation plans.	Municipal Emergency Management	Marginal	Short Term
	Early warning forecast systems to ensure public safety	Municipal Emergency Management	Significant	Long Term
	Work with trailer parks to insure evacuation of residents when severe weather is expected	Municipal Emergency Management	Marginal	Short Term
	Development of hazard information procedures and contact points for 211 system	Municipal Emergency Management	Significant	Long Term
Structural Projects	(not applicable)			

UTILITY FAILURE

The mitigation strategy for utility failure is to reduce the risk of utility failure, and impacts in the case of utility failures.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Reduce the number of trees that are in conflict with overhead utilities.	Municipal Public Works and National Grid/Central Hudson	Significant	Long Term
Property Protection	Insure that surge protection is in place for all electric and electronic equipment in Municipal facilities and buildings.	Albany County Department of General Services and Municipal Offices	Significant	Long Term
Public Education and Awareness	Use Municipal website and print materials to educate the public on safety during utility failure.	Municipal Emergency Management and utility companies	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Public education regarding emergency supplies and emergency power for appliances and heating.	Municipal Emergency Management and utility companies	Marginal	Short Term
	Reduce the peak day and peak time power usage through education and outreach	Municipal Emergency Management	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	Provide redundancy for service for critical facilities	National Grid/Central Hudson	Significant	Long Term
	Analyze data from past utility failures	National Grid/Central Hudson	Significant	Long Term
	Provide alternative power sources for traffic signals during power outages	Municipal Offices	Significant	Long Term
	Provide emergency lighting for critical areas and neighborhoods during power outages	Municipal Offices	Significant	Long Term
Structural Projects	(not applicable)			

ICE STORM / WINTER STORM

The mitigation strategy for ice storms is to reduce the impacts of ice storm damages. Damages due to ice storms may be caused by the weight of accumulated ice on power lines and other structures, fallen tree branches and due to slippery conditions. Other damages include the loss of crops due to ice storms, whether due to frozen conditions after the growing season has started or because of the physical damage of ice on the plants.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Insure that branches are pruned away from electric and telephone wires and dead standing trees are removed where they may fall on wires.	Municipal DPW and National Grid/Central Hudson	Significant	Long Term
Property Protection	Insure that salt and sand are stockpiled for icing events.	Municipal Public Works	Marginal	Immediate
	Develop tree pruning programs in the vicinity of utility lines.	Municipal Public Works	Marginal	Short term
	Collect data regarding past events and analyze potential future events	Municipal Planning	Significant	Long Term
	Installation of temperature sensing devices for critical bridges and roads	Municipal Public Works	Significant	Long Term
Public Education and Awareness	Increase public awareness of hazards from ice storms through Municipal websites and publications.	Municipal Emergency Management	Marginal	Short Term
	Public education regarding emergency supplies and emergency power for appliances and heating.	Municipal Emergency Management	Marginal	Short term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Increase public awareness of selective planting in the vicinity of utility lines.	Municipal Emergency Management	Marginal	Short Term
Natural Resource Protection	Ensure that injurious amounts of salt and sand do not wash into environmentally sensitive areas.	Municipal Public Works	Marginal	Short Term
Emergency Services	Continue to ensure that roadways are cleared and salted in an efficient manner	Municipal Public Works	Marginal	Immediate
	Use of early warning forecast services to warn of icing conditions	Municipal Emergency Management	Significant	Long Term
	Update and test components of evacuation plans.	Municipal Emergency Management	Marginal	Short Term
	Plan redundancy of service for critical facilities	Municipal Emergency Management/ National Grid/Central Hudson	Significant	Long term
Structural Projects	Encourage placing utilities underground in future subdivisions and developments to reduce damage from ice storms.	Municipal Planning Offices	Marginal	Short Term
	Retrofitting underground utilities in critical areas	Municipal Public works	Significant	Long Term

LANDSLIDE

The mitigation strategy for landslide is to prevent future landslides and reduce impacts from them if they occur.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Create maps of known Landslide areas	Municipal Planning Department	Significant	Long Term
	Collect data regarding past events and analyze potential future events.	Municipal Planning Department	Significant	Long Term
	Adherence to proper construction per NYS Building Code	Municipal Building Departments and Public Works Departments	Marginal	Immediate
	Consider hillside development regulations	Municipal Planning Departments and Boards	Marginal	Short Term
	Control of development in landslide areas and creation of setback requirements	Municipal Planning Departments and Boards	Marginal	Short Term
Property Protection	Preservation of sloped lands	Municipal Parks Departments, Planning Boards, Coop Extension Office, Nature Conservancy	Significant	Long Term
Public Education and Awareness	Provide information on landslide safety to the public.	Municipal Emergency Management	Marginal	Short Term
	Set up hazard information centers	Municipal Emergency Management	Marginal	Short Term
Natural Resource Protection	Encourage the use of best management practices (BMPs) for construction projects	Municipal Building Departments	Marginal	Immediate

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Require erosion control and stormwater management for construction projects	Municipal Building Departments	Marginal	Immediate
	Provide for stream corridor restoration	Municipal Public Works	Significant	Long Term
Emergency Services	Insure that there is a provision for landslide hazards in the emergency management plan.	Municipal Emergency Management	Marginal	Short Term
	Update and test components of evacuation plans	Municipal Emergency Management	Marginal	Short Term
	Test emergency response programs.	Municipal Emergency Management	Marginal	Short Term
Structural Projects	Structural bracing and reinforcement	Municipal Public Works	Significant	Long Term
	Slope stabilization projects, armoring slopes	Municipal Public Works	Significant	Long Term
	Relocating threatened structures or other improvements	Municipal Public Works	Significant	Long Term

TORNADO

The mitigation strategy for tornadoes is to reduce impacts and damages from tornadoes.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Insure the NYS building code is enforced for all construction projects, pre and post disaster, especially with regard to wind speed.	Municipal Code Enforcement	Marginal	Immediate
	Perform a structural review of windload for Municipal buildings and structures.	Municipal Building Departments and Code Enforcement	Marginal	Short term
	Recommend to other governmental, NGO (Non-governmental Organization) and commercial entities that a structural review of windload be conducted on buildings in Albany County. This would be especially important for multistory buildings such as the hospitals, court and office buildings.	Municipal Building Departments and Code Enforcement Albany County	Marginal	Short Term
	Assist critical care facilities such as hospitals and nursing homes that need to shelter-in-place with relocating generators, electrical and computer equipment and “hardening” facility i.e. shatter resistant glazing for windows.	Municipal Emergency Management	Marginal	Short Term
	Create and enforce use limitations for buildings based on structural makeup and vulnerability.	Municipal Planning Departments and Planning Boards	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Property Protection	Require retrofitting structural bracing and reinforcement	Municipal Building Departments, Code Enforcement and Public Works	Significant	Long Term
Public Education and Awareness	Increase public awareness of tornado hazards and how to reduce injury and property damage. Provide outreach for vulnerable populations, such as residents of trailer parks and households where English is a second language.	Municipal Emergency Management	Marginal	Short Term
	Creation of hazard information centers	Municipal Emergency Management	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	Update and test components of evacuation plans and emergency management plans.	Municipal Emergency Management	Marginal	Short Term
	Early warning forecast systems to ensure public safety	Municipal Emergency Management	Significant	Long Term
	Train emergency management personnel for hazard recognition	Municipal Emergency Management	Marginal	Short Term
	Work with trailer parks to insure evacuation of residents when severe weather is expected	Municipal Emergency Management	Marginal	Short Term
Structural Projects	(not applicable)			

OIL SPILL/ HAZMAT

The mitigation strategy for oil spills and hazardous materials releases is to prevent releases and to reduce the risk of soil, water and air contamination from petroleum and hazardous materials releases.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Develop spill prevention plans, including Spill Prevention, Control and Countermeasures Plans (SPCC)	Municipal Public Works, County Airport	Significant	Long Term
	Requirement for spill prevention plans	Municipal Building Departments and Code Enforcement	Marginal	Short Term
Property Protection	Strict enforcement of requirements for containment booms around tanks or vessels during transfer operations.	Municipal Code enforcement	Marginal	Immediate
	Removing underground storage tanks and requiring secondary containment for aboveground tanks	Municipal Code enforcement	Significant	Long Term
Public Education and Awareness	Program for placing "Drains to Waterway" medallions on storm drains.	Municipal Public Works and Soil and Water Conservation	Marginal	Short Term
	Use Albany County website and print material to encourage recycling of waste oil and other recyclables.	Environmental protection agencies such as sewer departments, water departments and planning agencies	Marginal	Short Term
Natural Resource Protection	Map known inland spill locations	Municipal Planning agencies	Significant	Long Term
	Contact agencies for information regarding leaking underground storage tanks	Municipal Planning agencies	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Emergency Services	Upgrade decontamination supplies and equipment.	Municipal Emergency Management	Marginal	Short Term
	Organize drills for local response agencies.	Municipal Emergency Management	Marginal	Short Term
	Review and evaluate emergency response plans	Municipal Emergency Management	Marginal	Short Term
	Stockpile containment and sorbent materials	Municipal Emergency Management	Marginal	Immediate
Structural Projects	(not applicable)			

FLOOD

The mitigation strategy for flooding is to prevent flooding and reduce the impacts of flooding.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Provide for stormwater management and drainage system maintenance with regular inspections of storm systems and clearing of storm drains, culverts and natural stream beds to insure reduce flooding from stormwater runoff.	Municipal Public Works	Marginal	Short Term
	Eliminate potential flooding problems in new building applications by review of runoff and groundwater data.	Municipal Planning/ Building Departments	Marginal	Immediate

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Planning & Zoning regulations for construction in floodplains and flood prone areas, including the creation of and enforcement of floodplain regulations	Municipal Planning Departments	Marginal	Short Term
	Reduction or limitation of impervious coverage in areas where stormwater runoff may cause flooding in flood prone areas.	Municipal Planning or Building Departments	Marginal	Short Term
	Implementation of new NYS Building Code for structures	Municipal Building Departments	Marginal	Immediate
	Transfer of development rights to governmental / environmental agencies for undeveloped flood prone properties.	Municipal Planning Departments	Marginal	Long Term
Property Protection	Assist critical care facilities such as hospitals and nursing homes that need to shelter-in-place to ensure that generators and critical equipment is protected from flooding.	Individual Facility with assistance from government and private funding	Marginal	Short Term
	Encourage retrofit of homes in flood prone areas. For example, elevate homes subject to repeated inundation.	Municipal Emergency Management	Significant	Long Term
	Provide wet/dry flood proofing assistance to homeowners with repeated basement flooding due to storms.	Municipal Public Works	Significant	Long Term
	Consider dewatering projects for areas with repetitive basement flooding due to rise in groundwater	Municipal Public Works	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Encourage homeowners to fill in basements to a point higher than historic groundwater levels to eliminate repetitive basement flooding problems. This may be accomplished through an assessment consideration	Municipal Public Works	Marginal	Short Term
	Encourage homeowners to eliminate basements in homes with repetitive basement flooding due to rise in groundwater. This may be accomplished through an assessment consideration.	Municipal Public Works	Marginal	Short Term
	Consider raising homes to bring first floor above anticipated flood level.	Municipal Public Works	Significant	Long Term
	Consider relocation of houses subject to repetitive flooding.	Municipal Public Works	Significant	Long term
	Consider purchase of properties subject to repetitive flooding.	Municipal offices	Significant	Long Term
	Evaluate potential of damage to cultural facilities in FIRM and SLOSH areas.	Municipal Planning Dept	Marginal	Short Term
	Encourage those in flood prone areas to purchase flood insurance.	Municipal Emergency Management	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Public Education and Awareness	Increase public awareness of flood hazards and how to reduce injury and property damage. Provide outreach for vulnerable populations, such as residents of trailer parks and households where English is a second language.	Municipal Emergency Management	Marginal	Short Term
	Educate the public on the hazards of flooding and benefits of flood insurance.	Municipal Emergency Management	Marginal	Short Term
	Set up hazard information centers	Municipal Emergency Management	Marginal	Short Term
	Require real estate disclosure of flood prone property	Municipal Offices	Marginal	Short Term
Natural Resource Protection	Insure that streams and rivers are free of debris that impedes flow, especially where they flow under roads.	Municipal Public Works	Marginal	Short Term
	Acquire vacant land for open space preservation, especially in flood prone areas.	Municipal Offices	Significant	Long Term
	Encourage the use of best management practices (BMPs) for construction projects	Municipal Building Departments	Marginal	Immediate
Emergency Services	Update and test components of evacuation plans. Ensure that critical roadways will not be subject to inundation.	Municipal Emergency Management and Municipal Public Works	Significant	Long Term
	Create and test flood response programs.	Municipal Emergency Management	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Ensure that flood warning systems and warnings for other emergencies are updated	Municipal Emergency Management	Marginal	Short Term
Structural Projects	Roadway drainage improvement for flood mitigation:	Municipal Public Works	Marginal	Short Term
	Consider reservoir modifications to protect nearby property in the case of flooding.	Water Departments and Districts	Significant	Long Term
	Construction of dikes or levees.	Municipal Public Works	Significant	Long Term
	Installation of tidal check valves for outfalls in tidal waters.	Municipal Public Works	Marginal	Short Term
	Consider raising roads above the floodplain in critical areas.	Municipal Public Works	Significant	Long Term
	Consider raising houses so that the first floor elevation is above the floodplain.	Municipal Code offices	Significant	Long Term

TERRORISM

The mitigation strategy for terrorism is to reduce the threat of terrorism in the interest of public safety and community well-being.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Determine the most vulnerable and susceptible facilities	Municipal Emergency Management	Significant	Long Term
Property Protection	Purchase Emergency Generator for Municipal Buildings.	Municipal Emergency Management	Significant	Long Term
	Purchase sprinkler system for Municipal Buildings.	Municipal Emergency Management	Significant	Long Term
	Purchase in-line baggage handling system equipped with explosive device detection system.	Municipal Emergency Management	Significant	Long Term
	Install surveillance cameras and security gates for heavy equipment, fueling facilities, hazmat facilities and public health facilities.	Municipal Emergency Management	Significant	Long Term
	Use of security devices at probable target facilities	Municipal Emergency Management	Significant	Long Term
	Use of protective measures for radiological facilities.	Municipal Emergency Management	Significant	Long Term
Public Education and Awareness	Increase public awareness of Terrorism Hazard. Promote "If you see something, say something".	Municipal Emergency Management	Marginal	Short Term
Natural Resource Protection	(not applicable)			

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Emergency Services	Municipal and governmental preparedness.	Municipal Emergency Management	Marginal	Short Term
	Purchase Emergency Equipment to Enhance Response capability:	Municipal Emergency Management	Significant	Long Term
	Upgrade communications equipment for emergency response.	Municipal Emergency Management	Significant	Long Term
	Purchase PPE for Fire Rescue.	Municipal Emergency Management	Marginal	Short Term
	Planning for evacuations	Municipal Emergency Management	Marginal	Short Term
	Install redundant communications and information technology in critical areas	Municipal Emergency Management	Significant	Long Term
	Conduct training and exercise for emergency management teams.	Municipal Emergency Management	Marginal	Short Term
	Stockpile equipment for emergency services, including medical supplies and test kits for contamination.	Municipal Emergency Management	Significant	Long Term

FIRE

The mitigation strategy for fire is to prevent fires and reduce impacts of fire in the community. Fire prevention and safety is an important consideration for the health and well-being of the community:

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Adherence to NYS Building Code. Continue to enforce codes and regulations regarding construction and building occupancy.	Municipal Code Enforcement	Marginal	Immediate
Property Protection	Ensure that all Municipal buildings are in compliance with fire code and that fire protection is in place and operational.	Municipal Building Depts.	Marginal	Short Term
	Review and evaluate existing codes for fireproof construction and fire related requirements	Municipal Planning and Building Departments	Marginal	Short Term
Public Education and Awareness	Increase public awareness of fire prevention and safety. Continue outreach to vulnerable population including the elderly, disabled, economically disadvantaged and households where English may be a second language.	Albany County Fire Coordinator, Volunteer Fire Departments, and ambulance corps.	Marginal	Short Term
	Fund private organizations to further enhance outreach to vulnerable populations.	Municipal Offices	Marginal	Short Term
	Collect data regarding past events and analyze future events	Municipal Planning / Emergency Management	Significant	Long Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Natural Resource Protection	(not applicable)			
Emergency Services	Review response procedures.	Municipal Emergency Management	Marginal	Short Term
	Purchase PPE for Fire Rescue.	Municipal Emergency Management	Marginal	Short Term
	Purchase detection equipment for fire departments.	Municipal Emergency Management	Marginal	Short Term
	Stockpile equipment for emergency response.	Municipal Emergency Management, County Fire Coordinator	Marginal	Immediate
Structural Projects	Encourage use of additional fire resistant construction measures for new construction and retrofit.	Municipal Building Departments and Code Enforcement	Marginal	Short Term

Mitigation Strategy for Moderately Low Ranking Hazards

DAM FAILURE : To reduce the risk of dam failures and reduce impacts of dam failures on downstream properties.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Develop inspection program	Water Departments and Districts	Significant	Long Term
	Provide maintenance program and increase in safety standards	Water Departments and Districts	Marginal	Short Term
	Collect data regarding past events and analyze potential future events.	Water Departments and Districts	Significant	Long Term
	Adherence to proper construction per NYS Building Code	Water Departments and Districts	Marginal	Immediate
Property Protection	Review and evaluate existing land uses downstream of existing dams	Albany County Planning Department	Significant	Long Term
Public Education and Awareness	Use the County website and print material to educate the public to the danger of local dam failures.	Albany County Emergency Management	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	Update and test components of evacuation plans. Ensure that critical roadways will not be subject to inundation.	Albany Emergency Management and Public Works	Significant	Long Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
	Create and test flood response programs.	Albany Emergency Management	Marginal	Short Term
	Ensure that warning systems for emergencies are updated	Albany Emergency Management	Marginal	Short Term
	Ensure that there is a provision for dam failure hazards in the emergency management plan.	Albany Emergency Management	Marginal	Short Term
Structural Projects	(not applicable)			

STRUCTURAL COLLAPSE: To reduce the risk of structural collapse

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Collect data regarding past events and analyze potential future events.	Albany Emergency Management	Significant	Long Term
	Adherence to proper construction per NYS Building Code	Municipal Building Departments	Marginal	Immediate
Property Protection	Review and evaluate existing codes for structural requirements and fireproof construction	Municipal Building Departments	Marginal	Short Term
	Inspect all Albany County buildings and facilities to insure their structural soundness.	Albany Planning Department, Engineering Division	Significant	Long Term
Public Education and Awareness	Use the County website and print material to educate the public to the danger of construction that does not comply with code and the necessity to obtain building permits and certificates of occupancy.	Albany Emergency Management and Planning Department, Code Enforcement	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Natural Resource Protection	(not applicable)			
Emergency Services	(not applicable)			
Structural Projects	Insure that All construction in Albany County is to code.	Albany Planning Department, Code Enforcement	Marginal	Immediate

TRANSPORTATION ACCIDENT: To reduce the risk of a transportation accident

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Insure that all Albany County employees are aware of the dangers at rail road grade crossings.	Albany Emergency Management	Marginal	Immediate
	Work zone training	Albany County Dept Public Works	Marginal	Short Term
	Maintenance of traffic signs and signals	Albany County Dept Public Works	Marginal	Short Term
	Enforcement of speed limits	Albany County Sheriff's Office and local law enforcement agencies	Marginal	Immediate
	Strict enforcement of DWI laws	Albany County Sheriff's Office and local law enforcement agencies	Marginal	Immediate
Property Protection	(not applicable)			

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Public Education and Awareness	Continue to educate the public about the dangers at grade crossings.	Albany County Traffic Safety Awareness Committee	Marginal	Short Term
	Discourage drinking and driving	Albany County Traffic Safety Awareness Committee	Marginal	Short Term
	Make the public aware of dangerous intersections and dangerous roads where repeat accidents occur	Albany County Traffic Safety Awareness Committee	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	Optical Preemption Signal- County wide	Albany County DPW	Significant	Long Term
	Purchase variable message signs	Albany County DPW	Significant	Long Term
Structural Projects	Construction of highway and intersection traffic safety projects: <ul style="list-style-type: none"> • Intersection improvements • Turn Lanes • Community Islands and Dividers • Roadway Reconstruction • Traffic Signal Improvements • Traffic Calming • Relief of traffic congestion in problem areas 	Albany County DPW and other City and State jurisdictions	Significant	Long Term

TEMPERATURE EXTREMES: Reduce the Risk of Extreme temperature to the public

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	(not applicable)			
Property Protection	Insure that all Albany County facilities have back up power generation or have a system in place to prevent pipes from freezing during a power outage.	Albany Emergency Management, Albany Public Works and Planning Department; Engineering Division	Significant	Long Term
Public Education and Awareness	Provide information to the public on the danger of heat and cold emergencies and where shelters will be located.	Albany Emergency Management and Department of Human Services	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	Open emergency shelters when necessary (heat or cold emergencies)	Albany Emergency Management	Marginal	Short Term
Structural Projects	Install backup power generators for shelters that would be used for heat and cold weather emergencies.	Albany Public Works/ Planning Department; Engineering Division	Significant	Long Term

EARTHQUAKE: Reduce the risk of damage from future earthquakes and tsunamis.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	(not applicable)			
Property Protection	Review Current County Building Code with regard to HAZUS model.	Albany Planning Department; Engineering Division	Marginal	Short Term
	Require retrofitting and structural reinforcement	Municipal Building Departments	Significant	Long Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Public Education and Awareness	Provide information on earthquake safety to the public.	Albany Emergency management	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	Insure that there is a provision for earthquake hazards in the emergency management plan.	Albany Emergency Management	Marginal	Short Term
Structural Projects	Insure that all future construction projects for Albany County are in compliance with earthquake hazard requirements.	Albany Public Works/ Planning Department; Engineering Division	Marginal	Short Term

DROUGHT: Reduce the damage from drought.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Employ water conservation measures for all Albany County buildings and grounds.	All County departments, Water departments	Marginal	Short Term
Property Protection	Encourage the use of drought resistant plants for projects taken on by municipalities and those reviewed by municipalities.	Municipal Planning Departments and Planning Boards, Albany County Soil & Water Conservation District	Marginal	Short Term
Public Education and Awareness	(not applicable)			
Natural Resource Protection	(not applicable)			
Emergency Services	(not applicable)			
Structural Projects	(not applicable)			

INFESTATION: Prevent the spread of infestation.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	(not applicable)			
Property Protection	(not applicable)			
Public Education and Awareness	Continue to work with the USDA to educate the public.	Albany Emergency Management	Marginal	Immediate
Natural Resource Protection	Insure that wood or wood products from USDA Quarantine area are not removed and used for projects in other areas.	All County Departments	Marginal	Short Term
Emergency Services	(not applicable)			
Structural Projects	(not applicable)			

WATER SUPPLY CONTAMINATION: Reduce impacts of water supply contamination.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Develop system inspection programs	Albany County Department of Health and water departments and districts	Significant	Long Term
	Implement testing and sampling procedures	Albany County Department of Health	Marginal	Long Term
	Collect data regarding past events and analyze potential future events.	Albany County Department of Health	Marginal	Long Term
Property Protection	Provide inspection program for supply source equipment and system components	Water Purveyors	Marginal	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Public Education and Awareness	Use the County website and print material to educate the public pertaining to water supply protection.	Albany County Department of Health	Marginal	Short Term
Natural Resource Protection	Use planning and zoning to protect water supply sources, watersheds and critical intake areas.	Municipal Planning Departments and Planning Boards, County Health Department	Marginal	Short Term
Emergency Services	Create and test water supply contamination response programs.	Albany Emergency Management and Public Works	Marginal	Long Term
	Ensure that warning systems for emergencies are updated	Albany Emergency Management	Marginal	Short Term
	Ensure that there is a provision for water supply contamination hazards in the emergency management plan.	Albany Emergency Management	Marginal	Short Term
Structural Projects	Retrofit systems with required components when and if required.	Water Purveyors, County Health Department	Significant	Long Term

WILDFIRE: Reduce the risk of wildfire and to reduce the impacts of wildfire.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Train a cadre of Park and Nature center employees in wildland fire prevention and basic fire fighting.	Albany Emergency Management/ NYSDEC Forest Rangers	Marginal	Short Term
	Ensure that building codes and fire codes are enforced.	Municipal Building Departments and Code Enforcement Offices	Marginal	Immediate
	Control the density of development and types of development in areas that are prone to wildfire.	Municipal Planning and Zoning Departments	Marginal	Short Term
	Acquire easements or promote open space preservation in wooded areas	Municipal Offices	Marginal	Long Term
Property Protection	Provide basic equipment for parks, forests and natural areas for small spot fires.	Albany Emergency Management	Marginal	Short Term
	Acquire hazard prone structures	Municipal Offices	Significant	Long Term
	Relocate hazard prone structures	Municipal Offices	Significant	Long Term
Public Education and Awareness	Provide information to the public on wildfire prevention.	Parks, Recreation Department	Marginal	Short Term
	Set up hazard information centers	Albany County Emergency Management	Significant	Short Term

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Natural Resource Protection	Encourage the use of best management practices (BMPs) for construction projects	Municipal Building Departments	Marginal	Immediate
	Forest and vegetation management	Planning Departments	Significant	Long Term
Emergency Services	Update and test components of evacuation plans. Ensure that critical roadways will not be subject to engulfment.	Albany Emergency Management	Marginal	Short Term
	Create and test fire response programs.	Albany Emergency Management	Marginal	Short Term
	Ensure that fire warning systems and warnings for other emergencies are updated	Albany Emergency Management	Marginal	Short Term
	Training for hazard threat recognition	Albany Emergency Management	Marginal	Short Term
Structural Projects	(not applicable)			

CIVIL UNREST: Increase public security and reduce the threat of civil unrest.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Continue to provide an opportunity for the public to voice their opinions through open, public meetings and timely response to citizen inquiries.	Albany County Executive's Office, County Legislature and Town Boards and Supervisor's Office	Marginal	Immediate
Property Protection	(not applicable)			

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Public Education and Awareness	Provide educational and recreational opportunities for at-risk youth to counter the beliefs, rituals and habits of gang culture.	Albany Department of Children, Youth and Families	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	(not applicable)			
Structural projects	(not applicable)			

EPIDEMIC: Reduce the risk of epidemic in the community. (Currently West Nile Virus and Lyme disease) Prevent the spread of rabies to Albany County.

Mitigation Strategy	Action	Responsibility	Estimated Cost	Time Frame
Prevention	Continue to hold the annual rabies vaccination clinic for pets.	Animal shelters, Albany County Department of Health, Society for the Prevention of cruelty to Animals (SPCA)	Marginal	Immediate
Property Protection	(not applicable)			
Public Education and Awareness	Continue to utilize Albany County website and printed materials to educate the public about West Nile Virus, Lyme Disease and rabies.	Albany County Emergency Management, Animal Shelters	Marginal	Short Term
Natural Resource Protection	(not applicable)			
Emergency Services	Work with County Health Department on PODs. (Point of Distribution)	Albany Emergency Management	Marginal	Short Term
Structural Projects	(not applicable)			

Analysis of Mitigation Actions

An evaluation of the mitigation actions was made using a set of factors for rating benefits in a systematic way, called STAPLEE. STAPLEE is an acronym that stands for the **S**ocial, **T**echnical, **A**dministrative, **P**olitical, **L**egal, **E**conomic, and **E**nvironmental (**STAPLEE**) opportunities and constraints of implementing a particular mitigation action. The various factors are discussed briefly as follows.

Social: The social factor answers the questions of whether the action is socially acceptable, has community acceptance, is compatible with present and future community values, or has an effect on a segment of the population.

Technical: The technical factor refers to whether the action is technically feasible, whether it is a long term solution, and whether there are secondary impacts from a technical standpoint.

Administrative: The administrative factor addresses the issue of whether the community has adequate staff to carry out an action, whether funding is allocated, whether the community has the capability to implement and maintain the action.

Political: The political factor refers to whether there is political or public support both to implement and maintain the action.

Legal: The legal factor answers the question whether the community has the state or local authority to implement the proposed action, and whether there is a potential for legal challenges to an action. The legal factor also addresses whether the proposed action is consistent with federal laws.

Economic: The economic factor addresses the cost of the action, economic benefits, the overall cost-effectiveness, and whether outside funding is required for an action.

Environmental: The environmental factor refers to effects on land, water, endangered species and waste sites, as well as whether the action is consistent with environmental goals.

Each proposed mitigation measure was analyzed according to these criteria. After analysis, those mitigation plans which were deemed to have the best cost/ benefit for the community will be those which have the highest priority for implementation. The Planning Committee met to perform the STAPLEE analysis. The following table contains a summary of the STAPLEE analysis. A “+” means the mitigation measure has a positive or neutral impact on the criteria and an “-” means the mitigation measure has a negative impact on the criteria.

LANDSLIDE																							
Alternative Actions	STAPLEE Criteria Considerations																						
	+ Favorable - Less Favorable * Not applicable																						
	S		T			A			P			L		E			E						
	(Social)		(Technical)			(Administrative)			(Political)			(Legal)		(Economic)			(Environmental)						
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	Feasibility Yes/No
Collect data regarding past events and analyze potential future events.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Adherence to proper construction per NYS Building Code.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Consider hillside development regulations.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Control of development in landslide areas and creation of setback areas.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Preservation of sloped lands.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Provide information on landslide safety to the public.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Set up hazard information centers.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Encourage the use of best management practices (BMPs) for construction projects.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Require erosion control and stormwater management for construction projects.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Provide for stream corridor restoration.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Insure that there is a provision for landslide hazards in the emergency management plan.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Update and test components of evacuation plans.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Test emergency response programs.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Structural bracing and reinforcement.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

OIL SPILL / HAZMAT

Alternative Actions	STAPLEE Criteria Considerations																						Feasibility Yes/No
	+ Favorable - Less Favorable * Not applicable																						
	S		T			A			P			L			E			E					
	(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)					
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
Develop spill prevention plans, including Spill Prevention, Control and Countermeasures Plans (SPCC).	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Strict enforcement of requirements for containment booms around tanks or vessels during transfer operations.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Program for placing "Drains to Waterway" medallions on storm drains.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Use Albany County website and print material to encourage recycling of waste oil and other recyclables. Continue "STOP" program (Stop throwing out pollutants).	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Map known inland spill locations.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Contact agencies for information regarding leaking underground storage tanks.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Upgrade decontamination supplies and equipment.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Organize drills for local response agencies.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Review and evaluate emergency response plans.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Stockpiling response equipment.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

FLOOD (CONTINUED)

Alternative Actions	STAPLEE Criteria Considerations																							Feasibility Yes/No
	+ Favorable - Less Favorable * Not applicable																							
	S		T			A			P			L			E			E						
	(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)						
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws		
Consider purchase of properties subject to repetitive flooding.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Evaluate potential of damage to cultural facilities in FIRM and SLOSH areas.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Encourage those in flood prone areas to purchase flood insurance.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Increase public awareness of flood hazards and how to reduce injury and property damage. Provide outreach for vulnerable populations, such as residents of trailer parks and households where English is a second language.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Educate the public on the hazards of flooding and benefits of flood insurance.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Set up hazard information centers.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Require real estate disclosure of flood prone property.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Insure that streams and river are free of debris that impedes flow, especially where they flow under roads.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Acquire vacant land for open space preservation, especially in flood prone areas.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Encourage the use of best management practices (BMPs) for construction projects.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Update and test components of evacuation plans. Ensure that critical roadways will not be subject to inundation.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Create and test flood response programs.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Ensure that flood warning systems and warnings for other emergencies are updated.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Roadway drainage improvement for flood mitigation.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Consider reservoir modifications to protect nearby property in the case of flooding.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Construction of dikes or levees.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Installation of tidal check valves for outfalls in tidal waters.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Consider raising roads above the floodplain in critical areas.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Consider raising houses so that the first floor elevation is above the floodplain.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	

TERRORISM																								ability Yes/N
Alternative Actions	STAPLEE Criteria Considerations																							
	+ Favorable - Less Favorable * Not applicable																							
	S		T			A			P			L			E			E						
(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)							
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws		
Determine the most vulnerable and susceptible facilities .	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Purchase Emergency Generator for the Airport Terminal Building.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Purchase sprinkler system for Airport Terminal Building.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Purchase in-line baggage handling system equipped with explosive device detection system.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Install surveillance cameras and security gates on DPW heavy equipment and fueling facilities.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Increase public awareness of Terrorism Hazard. Promote "If you see something, say something".	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Municipal and governmental preparedness.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Purchase Emergency Equipment to Enhance Response capability.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Upgrade communications equipment for emergency response at Airport.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Purchase Self Contained Breathing Apparatus for Fire Rescue.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Planning for evacuations.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Install redundant communications and information technology in critical areas.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Retrofit or upgrade critical facilities, to include blast resistant windows, access controls, ventilation system, egress improvements, improved lighting and closed circuit cameras.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Install Blast Fence and RON (remain overnight) fence slats.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	

FIRE																							
Alternative Actions	STAPLEE Criteria Considerations																						Feasibility Yes/No
	+ Favorable - Less Favorable * Not applicable																						
	S		T			A			P			L			E			E					
	(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)					
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
Adherence to NYS Building Code. Continue to enforce codes and regulations regarding construction and building occupancy.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Ensure that all County buildings are in compliance with fire code and that fire protection is in place and operational.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Review and evaluate existing codes for fireproof construction and fire related requirements.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Increase public awareness of fire prevention and safety. Continue outreach to vulnerable population including the elderly, disabled, economically disadvantaged and households where English may be a second language.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Fund private organizations to further enhance outreach to vulnerable populations.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Collect data regarding past events and analyze future events.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Review response procedures.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Encourage use of additional fire resistant construction measures for new construction and retrofit.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

STRUCTURAL COLLAPSE

Alternative Actions	STAPLEE Criteria Considerations																				Feasibility Yes/No		
	+ Favorable - Less Favorable * Not applicable																						
	S		T			A			P			L			E			E					
	(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)					
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
Collect data regarding past events and analyze potential future events.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Adherence to proper construction per NYS Building Code.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Review and evaluate existing codes for structural requirements and fireproof construction.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Inspect all Albany County buildings and facilities to insure their structural soundness.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Use the County website and print material to educate the public to the danger of construction that does not comply with code and the necessity to obtain building permits and certificates of occupancy.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Insure that All construction in Albany County is to code.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

TRANSPORTATION ACCIDENT																							
Alternative Actions	STAPLEE Criteria Considerations																						Feasibility Yes/No
	+ Favorable - Less Favorable * Not applicable																						
	S		T			A			P			L			E			E					
(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)						
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
Insure that all Albany County employees are aware of the dangers at rail road grade crossings.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Work zone training.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Maintenance of traffic signs and signals.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Enforcement of speed limits.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Strict enforcement of DWI laws.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Continue to educate the public about the dangers at grade crossings.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Discourage drinking and driving.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Make the public aware of dangerous intersections and dangerous roads where repeat accidents occur.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Optical Preemption Signal- County wide.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Purchase variable message signs.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Construction of highway and intersection traffic safety projects: • Intersection improvements • Turn Lanes • Community Islands and Dividers • Roadway Reconstruction • Traffic Signal Improvements • Traffic Calming • Relief of traffic congestion in problem areas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

TEMPERATURE EXTREMES

Alternative Actions	STAPLEE Criteria Considerations																				Feasibility Yes/No			
	+ Favorable - Less Favorable * Not applicable																							
	S		T			A			P			L			E			E						
	(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)						
	Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
Insure that all Albany County facilities have back up power generation or have a system in place to prevent pipes from freezing during a power outage.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Provide information to the public on the danger of heat and cold emergencies and where shelters will be located.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Open emergency shelters when necessary (heat or cold emergencies)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Install backup power generators for shelters that would be used for heat and cold weather emergencies.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

EARTHQUAKE																							
Alternative Actions	STAPLEE Criteria Considerations																						
	+ Favorable - Less Favorable * Not applicable																						
	S		T			A			P			L			E			E					
(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)						
Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	
Review Current County Building Code with regard to HAZUS model.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Require retrofitting structural bracing and reinforcement	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Provide information on earthquake safety to the public.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Insure that there is a provision for earthquake hazards in the emergency management plan.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Insure that all future construction projects for Albany County are in compliance with earthquake hazard requirements.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

CIVIL UNREST																										
Alternative Actions		STAPLEE Criteria Considerations																								
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		S		T			A			P			L			E			E							
		(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)							
		Community Acceptance	Effect on Segment of Population	Technically Feasible	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocation	Maintenance/ Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	Feasibility Yes/No	
Continue to provide an opportunity for the public to voice their opinions through open, public meetings and timely response to citizen inquiries.		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Provide educational and recreational opportunities for at-risk youth to counter the beliefs, rituals and habits of gang culture.		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

EPIDEMIC																										
Alternative Actions		STAPLEE Criteria Considerations																								
		+ Favorable - Less Favorable * Not applicable																								
		S		T			A			P			L			E			E							
		(Social)		(Technical)			(Administrative)			(Political)			(Legal)			(Economic)			(Environmental)							
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Continue to hold the annual rabies vaccination clinic for pets.		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y	
Continue to utilize Albany County website and printed materials to educate the public about West Nile Virus, Lyme Disease and rabies.		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y
Work with County Health Department on PODs. (Point of Distribution)		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Y

VII Plan Adoption

The federal regulations 44 CFR §201.4(c)(6) and §201.6(c)(5) of the Interim Final Rule require plans to be adopted before being submitted to FEMA for formal review and final approval. A copy of the resolution of adoption must be included with the plan.

Once the local governing body has approved the plan, it must be submitted to the State Hazard Mitigation Officer (SHMO) at the New York State Emergency Management Office (NY SEMO). NY SEMO is responsible for forwarding the plan to the FEMA Regional Office for review.

Sample Resolution

Resolution #XXXXXXXX

WHEREAS the Town of Islip has experienced severe damage from hurricanes, flooding, fires and other natural, human caused and technological hazards, on many occasions in the past century, resulting in property loss, loss of life, economic hardship, and threats to public health and safety;

WHEREAS a *Hazard Mitigation Plan* (the Plan) has been developed after more than one year of research and work by the Albany County Hazard Mitigation Planning Committee and the people of Albany County;

WHEREAS the Plan recommends many hazard mitigation actions that will protect the people and property affected by the natural hazards that face Albany County;

WHEREAS a public meeting was held to review the Plan as required by law;

NOW THEREFORE BE IT RESOLVED by the County Executive and Legislature of Albany County that:

1. The *Hazard Mitigation Plan* is hereby adopted as an official plan of Albany County.
2. The respective town officials identified in the strategy of the Plan are hereby directed to implement the recommended actions assigned to them. These officials will report annually on their activities, accomplishments, and progress to the Albany County Mitigation Planning Committee.
3. The Albany County Hazard Mitigation Planning Committee will provide annual progress reports on the status of implementation of the plan to the County Executive and the County Legislature. This report shall be submitted to the County by _____ **DATE** of each year.

PASSED by the County of Albany, this Day, Month, Year
APPROVED by me this Day, Month, Year

Signature

County Executive, Albany County

ATTESTED and FILED in my office this Day of Month Year.
Signature