

Section VI Hazard Mitigation Strategy, Goals and Objective

A. Hazard Mitigation – Strategic Priorities

1. Take advantage of development and funding opportunities when available to address, eliminate, or reduce hazards when appropriate.
2. Pursue hazard mitigation activities that are the most cost-effective at limiting or reducing hazards.
3. Promote cost-effective hazard mitigation projects that have the most significant opportunity to eliminate and reduce hazards.
4. Focus hazard mitigation efforts and priorities on measures that will reduce or eliminate hazards involving designated repetitive loss properties.
5. Emphasize hazard mitigation projects and goals that will prevent or reduce losses in designated high hazard flood zones.
6. Seek and invest in mitigation opportunities that will reduce or limit overall, long-term costs to governments and property owners.
7. Pursue mitigation solutions and activities that are consistent with other planning goals in the county to promote sustainable and managed growth.
8. Emphasize mitigation projects and actions that enhance and compliment local goals to promote tourism, encourage commerce, sustain agriculture, protect natural resources and maintain a quality living environment.
9. Encourage mitigation measures that manage development and protect natural features in sensitive areas; such as those with steep slopes, vistas, water resources, forested and conservation areas.
10. Avoid measures and actions that could promote or contribute to high density development in protected and hazard sensitive areas, and those that would negatively impact water resources.
11. Use mitigation to encourage hazard reduction and smart growth in areas designated for development, primarily in or near villages and hamlets, established commercial zones and where public services exist or are accessible.

B. Mitigation Strategies - Past and Present

Schoharie County and its municipalities have demonstrated a commitment to hazard mitigation that has been particularly focused on reducing flood losses for more than a decade. The devastating flooding of 2006 and 2011 has further strengthened the resolve of the community and its leaders to make changes and take action to reduce flood and other hazard impacts and insure a safer, more livable environment. These accomplishments have been achieved through cooperative inter-municipal efforts that involve local governments, the county, regional, state and federal partners. The following past and present measures taken by Schoharie County and its municipalities will be continued in the future.

Improved Land Use Management

In New York State land use regulation is largely a discretionary authority delegated to local units of local government – cities, towns and villages. Typical land use regulatory tools available to municipalities include zoning, which controls the type of land use; subdivision regulations, which govern the division of real property for sale and its use; site plan regulations, which govern the arrangements of buildings or improvements in the development of specific properties; and specialized regulations to protect unique community assets such as aquifers, or to regulate specific types of land uses such as mobile homes. The county role in land use management is limited to one of coordination under provisions of §239 of the General Municipal Law. The County Planning Commission meets monthly to review new laws, comprehensive plans and projects and can use their advisory capacity to help the municipalities mitigate hazards in planning and new construction. A table outlining the status of land use regulations in each of the municipalities in Schoharie County is included in the Section V Vulnerability Assessment.

All municipalities in Schoharie County participate in the National Flood Insurance Program. Construction standards for structures in the mapped 100-year floodplain or floodway have been regulated through flood damage prevention laws since the 1980s. Each municipality has a designated floodplain administrator and proper orientation and training of the administrators continues to be a priority. As with many municipalities, most development in Schoharie County villages and hamlets occurred in areas where building and transportation access was easiest, commonly the flat, easily accessible floodplain. The Village of Middleburgh and the Village of Schoharie predominately developed in the Schoharie Creek floodplain. To a lesser extent, the Village of Cobleskill and Village of Esperance have some development in the floodplain. Schoharie County received new countywide digital Flood Insurance Rate Maps in early 2004 and all twenty-two (22) municipalities adopted the maps and updated flood damage prevention laws in 2004.

Some communities have used local land use regulations to limit development in the floodplain. For example, in 2004 the Town of Middleburgh adopted a new zoning amendment requiring twenty (20) acres for newly created lots in the floodplain. Much of the land in the Town is predominately agricultural and classified as a New York State agricultural district, but some commercial development pressure on the edge of the Village of Middleburgh has been felt over the last decade, including the construction of a commercial bank. The twenty (20) acre lot size will help ensure that the predominate use of the land remains agricultural and that any new development will be sparse. In fact, a large farm in the floodplain, commonly referred to as “Pindar Flats” was listed for sale in 2005 and is impacted by the twenty (20) acre lot size requirement. This will help limit potential flood damages and emergency operations in the Town of Middleburgh. The Village and Town of Cobleskill zoned some floodplain portions of the Cobleskill Creek as ‘Land-Conservation’ limiting it to agricultural and recreational uses.

The table of local development standards in Section III shows that of the twenty-two (22) towns and villages in Schoharie County, all but three have written comprehensive plans; and except for three (3), all have local regulations governing the subdivision of land. Twelve (12) have zoning regulations in force that govern the minimum size and use of properties in the community, while one is in the process of being developed. Only five (5) have site plan reviews in place. In addition to these mentioned, there are six (6) municipalities in Schoharie County that have a homesite law, which similar to a zoning law in that it regulates area requirements (setback and acreage) and some minor uses.

Schoharie County Hazard Mitigation Projects that were identified in the previous 2006 Multi-Jurisdiction Hazard Mitigation Plan

Schoharie County Mitigation Projects

All of the mitigation projects undertaken to date in Schoharie County reduce the impacts of flooding. Approximately 100 floodplain acres have been acquired in the County and the land protected as open space. Five (5) homes have been elevated in the County. A list of projects completed or ongoing since 1996 include:

Town of Blenheim – Home Acquisition

One (1) home was acquired in the floodplain of the Schoharie Creek after five (5) feet of water impacted the first floor living space of a home in January 1996. This project is complete and one (1) acre of land in a frequently flooded portion of Blenheim is now open space. The elderly resident moved to a group home facility outside of the County. Hazard Mitigation Grant Program (HMGP) funds. Total cost - \$18,000.

Another HMGP project to purchase a flood prone, single family home on the banks of the Schoharie Creek is under review in 2006.

Town of Broome – Catskill Creek Home Acquisition

One (1) home was acquired in the floodplain of the Catskill Creek after flood damage occurred twice to the home in 2000 (picture on cover). The project is complete and 3.5 acres of land is open space. The residents relocated in the Town of Broome. HMGP funds. Total cost - \$51,000.

Town of Esperance – Home Elevation

Three (3) homes were elevated resulting in first floor living space approximately one (1) foot above the base flood elevation. Two (2) homes are located in the area referred to as “Priddle Camp” and one (1) home is located on Cripplebush Creek. Utilities were also raised. This project is complete. HMGP/NYDEC funds. Total cost - \$79,000.

Another HMGP project to elevate four (4) more homes is under review in 2006.

Town of Esperance – Fly Creek Restoration

This ongoing project utilizes Environmental Protection Funds through the NY Department of Environmental Conservation. The project involves stabilizing banks and altering the channel of Fly Creek where several properties and septic systems are severely eroding during high water events.

Town of Fulton – Home Acquisition

This project involved purchasing and demolishing approximately twelve (12) homes and over thirty-two (32) acres of land along Schoharie Creek. The homes were substantially damaged in January 1996. One (1) historically significant home was archived and relocated to high ground in Delaware County (picture at right shows dismantling of home). This project is complete. HMGP/NYDEC funds. Total cost - \$524,000.

**Town of Fulton – Redling Road Drainage**

This project involved installing new larger box culverts under a frequently flooded road and paving a small section of the road to reduce erosion and road repair costs. This project is complete. HMGP funds.

Town of Fulton – Pleasant Valley Home Acquisition

This ongoing project will purchase one home and ¼ acre that is threatened by ground subsidence and stream bank failure. HMGP funds. Approximate cost - \$100,000.

Town of Gilboa – Home Acquisition/Road Relocation/Church and Town Hall Relocation

This project was completed as three (3) separate projects and is the largest mitigation project completed in the County to date. Several residences along Stryker Road that were damaged in January 1996 were purchased and demolished. A County Road was relocated out of the floodplain and an historic church and town hall were relocated to higher ground (picture at right). This project is complete. HMGP/NYDEC funds. Total cost – 1 million

Town of Middleburgh – Home Acquisition

One (1) home near NYS Route 30 in an area of repetitive flooding was purchased and demolished after January 1996 flooding. This home was also flooded in 1987. This project is complete. HMGP funds. Total cost – \$63,000.

Town of Middleburgh – Home Elevation

One (1) home was elevated along Huntersland Creek. HMGP/NYDEC funds. Total cost – \$40,000.

Village of Middleburgh – Home Acquisition

Two (2) repetitive loss properties homes on Baker Avenue were purchased and demolished. The land is now utilized as open space and a gravel parking lot for a neighboring school. HMGP/NYDEC funds. Total cost - \$103,000.

Another HMGP project to purchase five (5) flood prone, single family homes on Baker Avenue is under review in 2006.

**Village of Middleburgh – Home Elevation**

One (1) historic home was elevated in the floodplain of Schoharie Creek (picture at left). Homes in the general vicinity experience flood waters at least once a decade. HMGP funds. Total cost - \$60,000.

Town of Sharon – Bowmaker Pond Restoration

This project restored an historical recreation area and wetland. In order to alleviate drainage problems in the Village of Sharon Springs, a diversion culvert was installed by NYSDOT to redirect water to West Creek and away from a problem drainage area. This project was funded with several grants, NYSDOT, and volunteer work and was completed in 2002.

Schoharie County Early Warning System/Flood Education

Primarily for floods, the County installed an early warning system that will also be utilized in the future for various hazard scenarios. The mapping component of the system is useful for mitigation planning, evacuation route planning, and shelter location identification. While it is a completed project, the early warning system is still being modified and improved. Flood awareness, training and education are a major ongoing component of this project. Funding was provided by NYSOEM/NYDEC. The County produced a 30-minute flood education video (news article – Appendix E) to run annually on local cable stations and distributed to schools and libraries in the County. Due to emergency issues surrounding a New York City owned dam in southern Schoharie County, an audible warning system and advanced call system are being developed in 2006.



Sign in Village of Cobleskill near Cobleskill Creek

Additionally, using NYDEC funds, the County installed sixty-one (61) signs at locations where roads intersect special flood hazard areas or at municipal boundaries (picture at right). The signs state “Flood Zone Regulation in Effect” and have been useful in prompting questions from the general public about flood issues.

Schoharie County Hazard Mitigation Projects that have been completed or initiated since the previous 2006 Multi-Jurisdiction Hazard Mitigation Plan was prepared

Flood-proofing, acquisition and removal of properties in the floodplain

Applications and processing to acquire and remove eight (8) properties from the floodplain in the Town of Blenheim are underway using the Hazard Mitigation Grant Program (HMGP)

Applications and processing to acquire and remove five (5) properties from the floodplain in the Town of Broome are underway using the Hazard Mitigation Grant Program (HMGP)

One (1) property in the Village of Cobleskill was acquired and removed from the floodplain using the Hazard Mitigation Grant Program (HMGP)

One (1) property in the Town of Conesville was acquired and removed from the floodplain using the Hazard Mitigation Grant Program (HMGP)

The Town of Esperance elevated one (1) floodplain structure using HMGP and is proceeding with the acquisition of eight (8) more floodplain properties

The Town of Esperance initiated planning to address stream and bank stabilization in Fly Creek

Homes in the floodplain of the Priddle Camp area were destroyed in the 2011 flood and rebuilding will not occur

The Town of Fulton acquired one (1) floodplain property and is proceeding with five (5) additional acquisitions

Applications and processing to acquire and remove three (3) properties from the floodplain in the Town of Gilboa are underway using the Hazard Mitigation Grant Program (HMGP)

Applications and processing to acquire and remove eight (8) properties from the floodplain in the Town of Middleburgh are underway using the Hazard Mitigation Grant Program (HMGP)

Four (4) floodplain properties were acquired and the applications and processing to acquire and remove six (6) more properties from the floodplain in the Village of Middleburgh are underway using the Hazard Mitigation Grant Program (HMGP)

Applications and processing to acquire and remove three (3) properties from the floodplain in the Town of Schoharie are underway using the Hazard Mitigation Grant Program (HMGP)

Applications and processing to acquire and remove seven (7) properties from the floodplain in the Village of Schoharie are underway using the Hazard Mitigation Grant Program (HMGP)

The Town of Seward targeted floodplain structures to initiate planning for flood mitigation or acquisition

Since 2006, fifteen (15) projects in seven (7) jurisdictions have been completed or are ongoing that address flood hazard mitigation for ***Repetitive Loss Properties***. Projects include acquisition, relocation and retrofitting and are further detailed in the table of Local Mitigation Initiatives and Projects that follows in this section

Stream management, stabilization and retention projects

The Village of Cobleskill is planning to create a wetlands flood retention area behind the State University at the top of North Grand behind Maranantha

The Village of Cobleskill has completed a streambank stabilization design prepared by Lamont Engineers

The Town of Broome is considering floodplain construction requirements to regulate development along Hauverville Creek

The Village of Cobleskill will purchase and install a Stream Gauge near the confluence of Cobleskill and West Creeks

The Town of Conesville and the Town of Gilboa developed and implemented a Stream Management Plan for Manorkill Stream

The Town of Fulton will connect two roadways, reinforce embankments, clear debris from streams and perform streambank stabilization to reduce flood risks

The Town of Jefferson evaluated and prepared a plan to make flood prevention improvements to twelve (12) roads, culverts and bridges

The Town of Jefferson is considering a riparian buffer zone to protect waterways and reduce flooding

The Village of Middleburgh initiated planning to develop a flood retention area and perform stream stabilization in Stony and Gorge Creek

The Town of Richmondville targeted floodplain structures to initiate planning for flood mitigation or acquisition

The Town of Schoharie completed stream stabilization work in Fox Creek

The Town of Seward completed stream stabilization work in West Creek

The Town of Wright completed stream stabilization work in Fox Creek

Landslides, Utilities and Communications

The Town of Seward prepared a geo-technical study to identify recommendations for mitigating landslides

The NYS Department of Transportation has initiated efforts to evaluate and mitigate slope failure, particularly along Route 10, and they are preparing a Slope Failure Traffic Re-routing Plan

The Town of Sharon and Village of Sharon Springs completed water and sewer expansion which will prevent flooding

Planning is underway on a cooperative government and private sector initiative to improve cellular communication service in the more sparsely populated and higher elevation areas in the south of the county. This improved cellular capability is important to improved emergency operations, public information and warning of hazards in the south of the county.

Retention Ponds

NYS Department of Transportation has initiated the creation of retention ponds at Route 30 and Route 443 as well as Route 30 and Apple Barrel.

C. Mitigation Goals and Objectives

Schoharie County has outlined the following goals and objectives to guide multi-jurisdictional hazard mitigation project planning and implementation to address priority hazards described in the risk and vulnerability assessments.

Goal 1: Protect Life and Property

Objective 1-1: Implement mitigation activities that will assist in protecting lives and property by making homes, businesses, infrastructure, and critical facilities more resistant to hazards.

Objective 1-2: Encourage homeowners and businesses to take preventive actions in areas that are especially vulnerable to hazards.

Objective 1-3: Build upon past efforts to characterize flood events by conducting additional flood studies and creating flood models.

Objective 1-4: Review existing local laws and ordinances, building codes, safety inspection procedures, and applicable rules to help ensure that they employ the most recent and generally accepted standards for the protection of buildings and environmental resources.

Objective 1-5: Ensure that public and private facilities and infrastructure meet established building codes and immediately enforce the codes to address any identified deficiencies.

Objective 1-6: Incorporate hazard considerations into land-use planning and natural resource management.

Objective 1-7: Encourage homeowners, renters, and businesses to purchase insurance coverage for damages caused by hazards.

Objective 1-8: Integrate the recommendations of this plan into existing local and county programs.

Objective 1-9: Implement mitigation activities that encourage environmental stewardship and protection of the environment.

Goal 2: Increase Public Awareness

Objective 2-1: Develop and implement additional education and outreach programs to increase public awareness of the risks associated with hazards and to educate the public on specific, individual preparedness activities.

Objective 2-2: Provide information on tools, partnership opportunities, funding resources, and current government initiatives to assist in implementing mitigation activities.

Objective 2-3: Implement mitigation activities that enhance the technological capabilities of the jurisdictions and agencies in the County to better profile and assess exposure of hazards.

Goal 3: Encourage Partnerships

Objective 3-1: Strengthen inter-jurisdiction and inter-agency communication, coordination, and partnerships to foster hazard mitigation strategies and/or projects designed to benefit multiple jurisdictions.

Objective 3-2: Identify and implement ways to engage public agencies with individual citizens, non-profit organizations, business, and industry to implement mitigation activities more effectively.

Goal 4: Provide for Emergency Services

Objective 4-1: Encourage the establishment of policies at the local level to help ensure the prioritization and implementation of mitigation strategies and/or projects designed to benefit essential facilities, services, and infrastructure.

Objective 4-2: Where appropriate, coordinate and integrate hazard mitigation activities with existing local emergency operations plans.

Objective 4-3: Identify the need for, and acquire, any special emergency services and equipment to enhance response capabilities for specific hazards.

Objective 4-4: Review and improve, if necessary, emergency traffic routes; communicate such routes to the public and communities.

D. Hazard Mitigation Initiatives, Projects and Improvements

Development of this Hazard Mitigation plan and the ongoing evaluation of hazards that have been taking place for many years, have resulted in identification of several mitigation measures that will enhance the protection of citizens and property in Schoharie County. Local community leaders have targeted the following actions and priorities to guide local hazard mitigation efforts in the years ahead. These hazard mitigation objectives were selected based on the findings of the Risk and Vulnerability Assessments outlined in Sections IV and V of this plan, and they complement the Hazard Mitigation Goals listed in Part A of this section. The Hazard Mitigation proposals included in this section reflect one or more of the following generally accepted types of hazard mitigation solutions.

- * **Prevention and Planning:** actions taken to prevent disasters from occurring and measures implemented to reduce the impacts of a disaster when they do occur, including government administrative or regulatory actions that influence the way land is developed and structures are built.
- * **Property Protection:** actions that involve the modification of existing buildings or structures to protect them from a hazard or remove them from the hazard area.
- * **Public Education and Awareness:** actions to inform and educate the public about potential hazards and how they can protect themselves and their families.
- * **Natural Resource Protection:** actions that preserve or restore the functions of natural features and systems.
- * **Emergency Services:** actions that provide the resources a community needs to protect people and property during and immediately after a disaster.
- * **Structural Projects:** actions that involve the construction of structures to reduce the impact of a hazard.

Integration of 2006 Hazard Mitigation Plan Goals and the 2011 Plan Update

Most hazard mitigation goals and projects identified in the 2006 plan have been carried-over and extended to the 2011 plan update. Even where projects have been undertaken or completed, most of the objectives are considered long-term initiatives to be implemented in phases over many years. For example, most communities have set goals to acquire and remove at-risk and repetitive loss properties from floodplains, and in many jurisdictions they may have targeted up to 8 or 10 properties for floodproofing and removal, but given limited funding and related factors, it may only be possible to act on 1-3 properties every few years.

Legend – to the following <i>Table of Hazard Mitigation Projects and Initiatives</i>		
Groups	Prevention and Planning Property Protection Public Education and Awareness Natural Resources Protection Emergency Services Structural Projects	
Initiative # 1 - 44	Initiative Description	
Hazard(s) Mitigated	See Section III - Hazard Definitions	
Goals & Objectives Met	See Previous Listing in this Section (VI)	
Agencies	Estimated Benefits	Estimated Costs
<p>-- Abbreviations --</p> <p>Ag & Mkts – Agriculture and Markets BCO – Building and Code Official CERT – Community Emergency Response Team DEC – Department of Environmental Conservation DEP – Department of environmental Protection DOH – Department of Health DOS – Department of State DOT – Department of Transportation DPW – Department of Public Works DSS – Department of Social Services EMO – Emergency Management Office EMS – Emergency Medical Services FEMA – Federal Emergency Management Agency FERC – Federal Energy Regulatory Commission FPA – Floodplain Administrator IT – Information Technology NRCS – Natural Resources Conservation Service NWS – National Weather Service NYC – New York City NYPA – New York Power Authority NYS – New York State OEM – Office of Emergency Management OFA – Office for the Aging SC – Schoharie County SUNY – State University of New York SWCD – Soil & Water Conservation District USDA – US Department of Agriculture</p>	<p>High</p> <p>Would have significant benefits for public safety and/or property protection in many communities and areas of the county</p> <p>Medium</p> <p>Would result in valuable improvements for public safety and/or property protection in multiple at-risk areas, neighborhoods and communities</p> <p>Low</p> <p>Would improve the community’s public safety capability and/or mitigate hazards for certain facilities or properties</p>	<p>High</p> <p>Greater than \$500,000</p> <p>Medium - High</p> <p>\$250,000 - \$500,000</p> <p>Low - Medium</p> <p>\$100,000 - \$250,000</p> <p>Low</p> <p>Less than \$100,000</p>

Table of Hazard Mitigation Projects and Initiatives

Prevention and Planning

1	<i>Provide support for ongoing compliance and enhanced participation in the National Flood Insurance Program (NFIP)</i>				
	a. Assist municipalities with NFIP Community Assistance Visits (CAVs) b. Provide support for enrollment/participation in the Community Rating System (CRS)				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agency <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storm	1-1 1-2 1-4 1-5 1-6 1-7	SC Planning <hr/> SC EMO SC SWCD NYSDEC NYSOEM FEMA ISO	High	Low-Medium

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2	<i>Continue to promote and assist municipalities with adopting regulatory standards to decrease vulnerability to natural hazards</i>				
	<p>a. Provide support for municipalities to incorporate consideration of steep slopes, vegetation management, riparian and wetland buffers, and floodplain management in local land-use decisions.</p> <p>b. Encourage promotion of Municipal comprehensive plans and land use regulations to include:</p> <ul style="list-style-type: none"> *Development patterns in which major transportation routes are located away from major population areas, schools and gathering areas. *Encourage interconnection of commercial properties in order to reduce use of major arterials *Encourage underground utilities in new development *Encourage plan to eliminate at-grade railroad crossings on State Routes and County Roads 				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agency <hr/> Support Agencies	Estimated Benefits	Estimated Costs
Flood Severe Storm Slope Failure Wildfire	1-1 1-8 3-1	SC Planning <hr/> FPA/BCO NYSDEC FEMA	Medium	Low-Medium	
3	<i>Continue to support and facilitate FEMA floodplain study/remapping and Risk MAP programs</i>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storm Slope Failure Wildfire Earthquake	1-1 1-3 1-6 1-9	SC Planning FEMA <hr/> SC EMO NYSOEM NYSDEC	Medium	Low-Medium

4	<p><i>Create Floodplain Management Advisory Committee</i></p> <p>a. Members to include Planning/Hazard Mitigation Officer, Emergency Management Office, NYSDEC Floodplain, and local Building Code Officials/Floodplain Administrators</p> <p>b. Avenue for communication, best practices, planning, training, and mutual aid.</p> <p>c. Pursue a more stringent site plan review for properties/development within the Special Flood Hazard Area</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 1-4 2-3 3-1	SC Planning SC EMO <hr/> FPA/BCO NYSDEC	High	Low-Medium
5	<p><i>Continue to provide support for ongoing and future mitigation related planning efforts at the municipal and regional level</i></p> <p>a. Create or Update Mitigation-related plans (included but not limited to):</p> <ul style="list-style-type: none"> * Highway Management Plans * Long-Term Community Recovery Plans * Stream Corridor/Watershed Management Plans * Building Code Official/ FPA Handbook <p>b. Maintain and expand partnerships and coordination through organizations actively involved in hazard reduction activities.</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 1-8 3-1	SC Planning SC DPW SCSWCD <hr/> NYSDEC NYSOEM NYSDOS FEMA	High	Medium

<p><i>Continue to work with county departments, local municipalities, schools, community agencies and businesses on planning efforts to address all-hazards and all phases of emergency management (including but not limited to: COOP/COG, EAP's, SOP/SOG's, School SAVE plans, Sunshine Fair EAP, etc)</i></p>					
6	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 1-4 2-3 3-1	SC EMO SC Planning <hr/> All SC Departments Local Municipalities NYSOEM School Districts / SUNY Human Service Agencies Private Sector Leaders	High	Low
7	<p><i>Provide outreach and support to Class A - High Hazard & Class B - Moderate Hazard Dam Owners in creating/updating Emergency Action Plans, including Inspection & Maintenance Plans</i></p> <p>a. Coordinate planning with local emergency response agencies and Schoharie County Emergency Management</p> <p>b. Continue to encourage NYS Dam Safety and the Federal Energy Regulatory Commission (FERC) to establish protocol for Class A dams to be used for flood control in potential flood situations, where technically feasible and when it does not endanger the dam</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
Dam Failure Floods	1-1 1-4 2-3 3-1	SC EMO Board of Supervisors <hr/> NYSDEC FERC NYPA NYC DEP	Medium-High	Low	

<i>Provide outreach and support to facility owners with Hazardous Material storage and handling in creating/updating Emergency Action Plans (including all Tier II facilities)</i>					
8	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
			Support Agencies		
	HazMat - Fixed Site Fire	1-1 1-4 2-3 3-1	SC EMO SC Fire NYSOEM	Medium-High	Low
<i>Continue County participation in, and encourage and support further local participation, in the NOAA/NWS "Storm Ready" and "SkyWarn Spotter" programs.</i>					
a. Provide information on the "Storm Ready" program to towns and villages b. Facilitate public outreach and awareness programs					
9	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
			Support Agencies		
	Flood Severe Storm Severe Winter Storm	1-1 1-2 2-1 2-2	SC EMO NWS / NOAA NYSOEM FEMA SC SWCD	Medium	Low
<i>Evaluate worst-case drought scenarios within Schoharie County for possible further action.</i>					
10	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
			Support Agencies		
	Drought	1-1 3-1	SC EMO NWS / NOAA NYS DEC NYS DOH Farm Bureau NYS Ag Mkts	Medium	Medium

<i>Integrate & Coordinate the findings and recommendations of the Multi-Jurisdiction All Hazards Mitigation Plan with other county and local planning and regulatory mechanisms.</i>					
11	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
			Support Agencies		
	All	1-1 1-4 2-3 3-1	SC EMO SC Planning	Medium-High	Low
			Municipal Officials NYSOEM		
<i>Provide copies of all approved plans for public review at Town/Village Halls, Public Libraries, Emergency Management Office, Planning & Development Office, Clerk of the Board and post online at the Schoharie County Website</i>					
12	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
			Support Agencies		
	All	1-1 1-4 2-3 3-1	SC EMO Municipal Officials	Medium-High	Low
			SC Planning NYSOEM		

Property Protection

13	<p><i>Continue to promote, support and develop applications for Hazard Mitigation grant funding to mitigate floodprone structures and infrastructure</i></p> <ul style="list-style-type: none"> a. Continue to develop inventory of at-risk buildings and infrastructure and develop mitigation priorities b. Conduct targeted outreach to repetitive loss and severe repetitive loss properties and other important mitigation targets c. Conduct analysis to understand the cost benefit of mitigation projects, including socio-economic and community character impacts d. Assist with the development of municipal applications e. Develop applications at the county level as appropriate f. Locate and apply for appropriate match funds 				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies ----- Support Agencies	Estimated Benefits	Estimated Costs
Flood Severe Storm	1-1 1-2 2-1	SC Planning ----- Municipal FPA/BCO County Departments SCSWCD NYSDEC NYSOEM FEMA	High	Medium	

14	<i>Maintain viability and operation of Critical Facilities</i>				
	a. Review and maintain the list of all Critical Facilities within the County b. Ensure new critical facilities are located in areas of low hazard potential and properly constructed c. Work with utility companies to identify critical utility lines and ways to ensure their safety during hazard events d. Ensure critical facilities have backup power supply (or manual hookup for emergency generator)				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies ----- Support Agencies	Estimated Benefits	Estimated Costs
Flood Severe Storms	1-1 1-4	SC EMO Board of Supervisors	High	High	
15	<i>Relocate the County Public Safety Facility outside of the floodplain (1% annual & 0.2% annual)</i>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies ----- Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storm	1-1 1-4	Board of Supervisors ----- SC Recovery Manager	High	High
16	<i>Continue efforts to appropriate funding and implement mitigation projects as identified in county Department of Public Works Capital Programs</i>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies ----- Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storm Slope Failure	1-1 4-1	SC DPW	High	High

<i>Consider road abandonment for non-essential roads in high-hazard areas, specifically those vulnerable to flood and slope failure</i>					
17	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
			Support Agencies		
	Flood Severe Storm Slope Failure	1-4	SC DPW	Medium-High	Medium
<i>Continue to work with SCSWCD and USDA-NRCS to manage and implement the Emergency Watershed Protection (EWP) program to mitigate damage to infrastructure</i>					
18	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
			Support Agencies		
	Flood Severe Storms Slope Failure	1-1 3-1 3-2	SC Planning SCSWCD SC DPW USDA NRCS	High	Medium

Public Education and Awareness

19	<p><i>Provide hazard prevention and preparedness training for the general public</i></p> <p>Work with existing federal, state and county programs to bring appropriate training to the general public, including but not limited to:</p> <ul style="list-style-type: none"> * Family Disaster Planning * Emergency Supplies and Personal Preparedness Kits * Shelter in Place & Evacuation Procedures * Safety: including but not limited to; fire protection, outdoor and recreation safety, transportation, weather and hazard specific awareness, etc. * Animals in Disaster & Community Animal Response Team (CART) * First Aid & CPR * Community Emergency Response Team (CERT) 				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
All	1-1 4-3	SC EMO SC Fire SC EMS <hr/> NYSOEM NYSDEC FEMA Cooperative Extension Farm Bureau American Red Cross	Medium	Low-Medium	

<p><i>Improve public understanding of disaster preparedness and what to do before, during and after emergency</i></p> <p>Develop education and outreach programs to address specific issues, including but not limited to:</p> <ul style="list-style-type: none"> * Personal preparedness * Multiple sources for Information and situational awareness * Available notification and warning services * Evacuation routes and shelter locations * Travel advisories and safe travel tips * Generator and space heater use and dangers 					
20	<p>Hazard(s) Mitigated</p>	<p>Goals & Objectives Met</p>	<p>Lead Agencies</p> <hr/> <p>Support Agencies</p>	<p>Estimated Benefits</p>	<p>Estimated Costs</p>
	<p>All</p>	<p>1-5 2-1 2-2 2-3 4-4</p>	<p>SC EMO SC Fire SC EMS SC DOH</p> <hr/> <p>NYSOEM NYSDEC FEMA American Red Cross CERT</p>	<p>Medium</p>	<p>Low-Medium</p>
<p><i>Develop partnership programs and encourage the participation of media organizations in promoting awareness and public education for personal preparedness and hazard mitigation activities</i></p>					
21	<p>Hazard(s) Mitigated</p>	<p>Goals & Objectives Met</p>	<p>Lead Agencies</p> <hr/> <p>Support Agencies</p>	<p>Estimated Benefits</p>	<p>Estimated Costs</p>
	<p>All</p>	<p>2-1 3-1 3-2</p>	<p>SC EMO SC Fire SC EMS SC DOH</p> <hr/> <p>NYSOEM NYSDEC FEMA</p>	<p>Medium</p>	<p>Low-Medium</p>

<p><i>Increase awareness of health related safety, precautions and emergencies</i> - including but not limited to; influenza, rabies, ringworm, water-borne pathogens, lyme disease, anthrax, West Nile, and white powder substance</p>					
22	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	2-1 2-2 2-3	SC DOH SC EMO <hr/> NYSOEM NYSDOH	Medium	Low-Medium
<p><i>Create and encourage partnerships among existing community resources and organizations to assist with Public Education and Awareness Campaigns</i></p> <p>a. This would include, but is not limited to; the National Flood Insurance Program (NFIP), floodplain management and stream protection and maintenance. It would include groups such as Building Code Officials/Floodplain Managers, Real Estate Agents, Insurance Companies and local Agents, Surveyors, and Contractors</p> <p>b. Efforts would include topics related to personal preparedness, flood safety, mold remediation, and other hazard specific information. Human services groups such as Churches, SC CAP, Human Services Community Council, Social Services, Mental Health, DOH and others can assist with public outreach</p>					
23	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	2-1 2-2 2-3	SC EMO SC Planning SC DOH <hr/> BCO/FPA	Medium	Low-Medium

24	<p><i>Continue to work with SC Information Technology (IT) to develop a user-friendly, comprehensive website and internet applications for emergency public information and hazard education</i></p> <p>a. Including but not limited to; preparedness, planning, situational awareness, road closures - plus identification and notification of potential threats and hazardous or damage areas</p> <p>b. expanded applications and use of social networking and group notification capabilities to increase the scope and speed of public notification and information efforts</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	2-1 2-2 2-3	SC EMO SC IT	High	Low-Medium

Natural Resource Protection

25	<p><i>Research new, cost-effective ways of stabilizing failing soil slopes</i></p> <p>Inventory existing slope failures; research stabilization methods</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Slope Failure Severe Storm Flood	1-1 1-3	SC DPW <hr/> SCSWCD	Medium	Low-Medium

26	<p><i>Develop a Stream Corridor Management Program for Schoharie Creek, other drainage areas and major tributaries</i></p> <p>a. Conduct a study of major streams in Schoharie County and develop a program to implement projects for stabilizing stream channels and restoring natural stream processes that will reduce flood threats</p> <p>b. Evaluate opportunities and implement measures to alleviate floods by using retention and related upstream water management</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Slope Failure Severe Storm Flood	1-1 1-3	SCSWCD <hr/> SC Planning	High	High
27	<p><i>Conduct "Post-Flood Emergency Stream Intervention" Training</i></p> <p>Conduct regular training for municipal public works personnel and contractors who perform work in stream corridors.</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Slope Failure Severe Storm Flood	1-1 1-3	SCSWCD <hr/> SC Planning	High	Medium
28	<p><i>Promote and support partnerships between county and municipal Public Works and Highway personnel with the SCSWCD Stream Program Manager for repair and flood mitigation work affecting roads and drainage systems</i></p> <p>Including but not limited to: culvert sizing, ditch erosion, slope failure and stream work</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Slope Failure Severe Storm Flood	1-1 1-3	SC DPW Municipal DPW/Highway Officials SCSWCD	High	Low-Medium

<i>Work with utility companies to promote implementation of vegetation management plans to protect lines and prevent outages</i>					
29	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Severe Storm Severe Winter Storm	1-1 1-5 3-1 3-2	SC DPW SC EMO Utility companies (power and communications)	Low-Medium	Low
<i>Develop and implement a strategy for maintenance of privately owned stormwater drainage systems & secondary stream channels</i>					
Educate owners and maintenance personnel about flood mitigation measures and opportunities					
30	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storm	2-1 2-2 2-3	SC EMO SC Planning SCSWCD	High	Low-Medium

Emergency Services

Facilitate training and exercise programs for municipal officials, staff, first responders and community agencies

- a. Work with existing federal, state and county programs to bring appropriate training to county departments, municipalities and first responders:
 - * Firefighting specific training
 - * Emergency Medical specific training
 - * NIMS & ICS
 - * Post-Disaster Code Enforcement and Damage Assessments
 - * NFIP floodplain development requirements and compliance
 - * Emergency Operations Center & Position Specific Training
- b. Include all resources (people, special teams, equipment, etc.)
- c. Develop an HSEEP compliant Exercise Program to maximize multi-agency emergency management cooperation, coordination and collaboration
 - * Includes Seminars, Workshops, Tabletop Exercises, Games, Drills, Functional Exercises, and Full-Scale Exercises
 - * Promote and Utilize HSEEP compliant After Action Review and Improvement Plans
- d. Look for mitigation funding to support improvements and recommendations highlighted in disaster after-action reports, training and exercises

31

Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies	Estimated Benefits	Estimated Costs
		Support Agencies		
All	1-1 4-3	SC EMO SC Fire SC EMS	Medium	Low-Medium
		NYSOEM NYSDEC FEMA		

32	<p><i>Develop and Implement a county-wide flood monitoring and warning system</i></p> <p>a. Inventory existing resources in the county and neighboring counties, and develop partnerships to implement flood monitoring and warning systems, which could include:</p> <ul style="list-style-type: none"> * Stream Gages * Rain Gages * Snow Pillows * Equipment & Software to collect and monitor data * Equipment & Software to model flood hazards <p>b. Identify gaps in sensor coverage & work with adjacent counties to extend coverage</p> <p>c. Develop funding proposal to cover additional sensors, other hardware, data transfer and storage, software and administration</p> <p>d. Develop and Identify funding source(s) to cover maintaining system</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storm Dam Failure	1-1 1-8 2-3 3-2 4-1	SC EMO SC Planning <hr/> SCSWCD NYSOEM NWS USGS	High	High

33	<p>Implement a continuing review and updating process for maintenance and improvement of evacuation routes, signs and supporting technologies</p> <p>a. Management of the evacuation route system should include revised paper and digital mapping which are linked to websites, communications systems and social networking</p> <p>b. Review the effectiveness and placement of stationary signs and replace as appropriate</p> <p>c. Consider technology improvements for signs and information management; including lighting and automated operation, LED applications, variable message systems and cellular applications</p> <p>d. Include alternate routes for emergency vehicles around known high-risk hazard areas</p> <p>e. Revise and exercise activation and notification procedures for emergency responders, communications personnel, public officials and citizens</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 4-4	SC EMO SC DPW SC Sheriff Board of Supervisors NYPA NYC DEP	Medium	Low-Medium
34	<p>Promote continuing use and enhancements of Highway/Roadway signs to inform the public about flood hazard areas, evacuation routes and procedures</p> <p>a. Improve sign design, placement and maintenance</p> <p>b. Use signage for multiple hazards to improve recognition and familiarity; including applications for zoning, floodplain management, evacuations, flood hazard instructions, shelter locations</p> <p>c. Consider LED and alternate sign designs to enhance recognition and efficiency</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storm	1-1 4-4	SC DPW <hr/> Local DPW/Highways SC EMO	High	High

<i>Improve County GIS Capabilities and Data Repository</i>					
a. Create a live damage assessment and road closure mapping platform b. Identify gaps in current data repository c. Develop a funding proposal to cover additional hardware, software, storage and administration of data					
35	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 1-3 2-2 3-1 4-3	SC Planning <hr/> SC Real Property SC Information Technology	High	Low-Medium
<i>Improve countywide emergency communications capabilities and infrastructure</i>					
a. Encourage legislators to petition the FCC to improve cell phone coverage throughout the county b. Continue implementation of the countywide communication system study and upgrade project c. Improve mobile communications capabilities in the county; including vehicles and mobile equipment to support emergency expansion, remote demands and system disruptions d. Continue to identify and offer available county and municipal properties for expansion of cellular facilities and coverage					
36	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 1-4 4-3	SC Sheriff SC Fire SC EMO <hr/> Board of Supervisors SC Information Technology Municipal Officials Cellular providers	Medium-High	Medium-High

<p><i>Maintain, enhance and update Mutual Aid agreements with surrounding communities</i></p> <p>a. Revise procedures to implement provisions of local government mutual aid authorities added to NYS Executive Law, Article 2-B</p> <p>b. Conduct inter-governmental briefings and Tabletop Exercises to reinforce implementation of Mutual-Aid plans</p>					
37	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 1-4 4-3	SC EMO SC DPW <hr/> County Attorney Municipal Officials NYSOEM NYSDOT (Regional Transportation Infrastructure Group)	Medium-High	Medium-High
<p><i>Continue to improve the operation and use of the automated emergency public notification system</i></p> <p>a. Investigate systems available for emergency notification, including stand-alone systems and CAD options</p> <p>b. Implement appropriate system for the widest coverage and successful outreach</p>					
38	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	2-3	SC EMO Board of Supervisors	High	Medium-High

39	<p><i>Promote an expanded role and resources for the county’s RACES amateur radio volunteer group in supporting emergency communications</i></p> <p>a. Identify deficiencies in equipment and training b. Develop Standard Operating Procedure for activation c. Prepare funding proposal and identify revenue opportunities for improvements e. Include RACES participation in emergency training, exercises and activations</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	2-3	SC EMO Board of Supervisors	Medium-High	Low-Medium
40	<p><i>Develop and Implement a functional needs registry, monitoring system and evacuation plans for residents with functional access needs</i></p> <p>a. Create registry database b. Work with existing agencies and departments to develop monitoring system for vulnerable populations during hazardous weather c. Work with existing agencies and departments to develop evacuation assistance plans, identify areas or sites where services are needed, and determine specific residents who would need evacuation and/or transportation help d. Promote, support and develop local & county Fire and EMS functional needs evacuation plans</p>				
	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	3-1 3-2	SC DOH SC EMO SCDSS <hr/> SC OFA SC IT Human Service Agencies	High	Low

<p><i>Identify deficiencies in equipment and training in local Fire Departments and EMS Squads</i></p> <p>a. Work with Coordinators to seek local input b. Develop asset lists & MOU agreements c. Develop funding proposal to cover additional equipment</p>					
41	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	3-1 3-2	SC Fire SC EMS <hr/> SC EMO Local Fire Chiefs EMS Officers	Medium	Low-Medium
<p><i>Assign roles, identify backup and replacement personnel and participate in training and exercises related to emergency response plans.</i></p> <p>a. Each department and agency should designate staff for specific positions and roles they are assigned in emergency response plans b. Develop multi-level line of succession for each position c. Provide training and exercises related to emergency response d. Regularly review and update personnel availability, assignments and lines of succession</p>					
42	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	1-1 4-3	SCEMO <hr/> All departments/agencies	Medium	Low-Medium

Structural Projects

Support funding and applications to purchase backup generators and other redundant utilities for critical facilities and intersection traffic lights					
43	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	All	4-1 4-2 4-3 4-4	SCEMO SC DPW SC Sheriff <hr/> Board of Supervisors Municipal officials Local Fire Chiefs School Districts Facility Administrators	High	Medium-High
Continue to support and enhance SC Highway Management Program					
a. Complete inventory of current highway infrastructure at county and local level b. Create and apply design standards for bridges, culverts and scour protection c. Replace or retrofit undersized structures to meet current standards d. Develop programs to implement coordinated maintenance and mitigation activities to reduce risk to public infrastructure					
44	Hazard(s) Mitigated	Goals & Objectives Met	Lead Agencies <hr/> Support Agencies	Estimated Benefits	Estimated Costs
	Flood Severe Storms	4-1 4-2 4-3 4-4	SCDPW SCSWCD Municipal DPW/Highways	High	Medium-High

Hazard Mitigation Measures To Be Implemented Countywide

These projects would be organized and implemented using a countywide approach with county coordination and active municipal participation. Many hazard mitigation activities implemented in the County have positive impacts for every municipality and allow for sharing of resources and services. Municipal support for these actions is a key to successful implementation, but County resources and employees will often provide the needed leadership. A more detailed description of each project is outlined in Appendix 6.

All Hazards

Hold a bi-annual hazard information meeting for county and municipal officials and the public

Distribute hazard information to government officials and the public

Place Public interest articles about hazard protection and mitigation in local newspapers

Include hazard information on the County website

Support hazard education for county and local government officials

Review and update local emergency plans

Provide NOAA weather radios to residents and businesses

Improve Early Warning Systems

Flooding and Dam Safety

Improve Geographic Information System (GIS) capabilities for emergency and hazard mitigation planning

Provide direct mailings to property owners in flood prone areas about flood prevention and hazard mitigation

Improved hazard protection for County buildings and facilities

Maintain flood zone and flood evacuation signs, information and routes

Replace/install stream gauges

Inventory storm water infrastructure

Improve private dam safety/inspections

Work with dam owners to improve dam safety

Commence beaver dam inventory/monitoring

Assist property owners with flood hazard mitigation measures

Upgrade existing drainage structures

Design or modify local plans and laws to effectively manage development in floodplains and minimize hazards

Other Hazards

Explore providing brush pickup or disposal locations with municipalities

Make sure local plans/laws/projects consider severe weather mitigation

Emergency planning and coordination with owners of gas pipelines

Assess the vulnerability of County facilities to a terrorist attack

Coordination traffic and transportation improvements with the County Safety Board

Prepare access management plans for State highways

Provide Defensive Driving for county and local officials

Develop High Accident Area Identification data to help minimize traffic risks

Conduct planning with NYSDOT to improve safety at rail crossings

Make sure local plans/laws/projects consider pedestrian and traffic safety

Implement Early Warning Systems for hazardous material threats

Improved Hazard and Emergency Planning for Agricultural operators

Hazardous Materials Awareness training for municipal officials

Inventory accessible water supplies for firefighting and determine where new dry hydrants should be installed

Inform property owners about land use regulations and practices that will protect watershed resources, reduce flood threats and limit hazards

Inventory and map monitor wells to manage ground water supplies and droughts

Implementation plans to prevent and manage epidemics and maintain the county Animal Disease Response Team

Work with the National Speleological Society to set up and advertise training for performing cave rescues

Distribute information to the public about accessing and exploring caves.

Identify resources to install generators at critical facilities and upgrade public sewer, water and communications infrastructure

Hazard Mitigation measures to be implemented by each municipality

Municipal officials would take the lead for implementation of these projects, with County assistance and support. In some, but not all cases, they will require federal, state or other outside funding.

- ❖ Periodically review and revise comprehensive plans and land use regulations to manage development, mitigate flooding and minimize hazards
- ❖ Address municipal staffing needs for emergency preparedness and floodplain management, to include improved use and training of existing staff to accomplish these priorities
- ❖ Assist property owners with flood-proofing structures and other flood prevention measures
- ❖ Upgrade existing drainage structures and systems, consider regular stream maintenance programs and improved watershed protection measures
- ❖ Encourage Community Rating System (CRS) participation which can help lower flood insurance rates
- ❖ Improve local weather monitoring technology and distribution of hazardous weather information
- ❖ Improve coordination of road and highway maintenance during extreme weather events, and participate in county and regional efforts to better share and communicate road condition and closing information

- ❖ Conduct vulnerability assessments for municipal water systems to evaluate risks and identify potential improvements to prevent criminal acts and/or terrorist attack
- ❖ Assess the vulnerability of all municipal facilities to criminal threats and terrorist attack
- ❖ Maintain communication with County DPW and NYS Department of Transportation to better prepare for, respond to and mitigate hazards
- ❖ Provide municipal personnel with defensive driving training
- ❖ Improved monitoring, maintenance and emergency power for traffic control devices
- ❖ Participation by local fire department and emergency services in hazard mitigation plan activities, including training and plan updates
- ❖ Participation by local fire departments and emergency services in cave rescue training, even if no caves are located in their response district

Town and Village Hazard Mitigation Initiatives and Projects

Town of Blenheim

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 46 structures in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted	Acquisition of 1 residential structure completed in 2007 (HMGP)	Complete ongoing HMGP floodplain acquisition projects – 7 properties
Demolish highway garage, build new garage outside floodplain		
Have NYS elevate NYS Rt 30 at cliffs		
State /County work to reduce rockslides on Rt 30 at town line		
Create firebreaks in forested areas near steep slopes		

Town of Broome

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 4 residences in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		Complete ongoing HMGP floodplain acquisition projects – 5 properties. Consider floodplain construction requirements along Hauverville Creek.
Inventory flood risks and work with property owners (Catskill Creek) on measures they can take to protect structures from flood risks		
Create and maintain firebreaks near structures close to forested areas with steep slopes.		
Implement projects for stabilizing stream channels in locations where erosion threatens		

Town of Carlisle

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 9 residences in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		
Participate in stream stabilization study needs to be performed on Fly Creek.		

Town of Cobleskill

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Review Howes Cave quarry projects to determine impacts to underlying mines/caves. Support mining museum and education efforts to protect existing mines/caves		
Work with county on stream stabilization efforts for Schoharie and Cobleskill Creeks		
		Mitigate railroad vibration that destabilizes Caverns Road, making it more vulnerable to washouts and flood damage

Village of Cobleskill

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate structures in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted	Acquisition of 1 commercial structure completed in 2008 (HMGP)	
Develop an Emergency Action Plan for the Village of Cobleskill water reservoir dams		
Purchase and install alternative power sources for lighted intersections		
Identify resources to address bank stabilization and flood problems of Mill Creek in the Village. Explore creating a special-taxing district for properties bordering the creek to fund protection		
Evaluate opportunities to alleviate village flooding by implementing upstream projects; such as wetland creation, retention systems and diversions. Consider combined Village/Town efforts and potential grant funding		Create wetlands flood retention behind SUNY at top of North Grand behind Maranantha
Install protection for dry hydrant in Village of Cobleskill Veteran's Park pond		
Study, develop, and implement projects for stabilizing streambanks in locations where erosion threatens development and agriculture. A priority is Mill Creek in the village	Streambank stabilization design prepared by Lamont Engineers	Purchase and install stream gauge on Cobleskill Creek near confluence of West Creek.

Town of Conesville

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 10 residence in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted	Acquisition of 1 residential structure completed in 2011 (PDM)	
Evaluate and implement projects for stabilizing streambanks in locations where erosion threatens development and agriculture. A priority is Manor Kill	Development and implementation of the Manorkill Stream Management Plan - 2009	
Work with the County to identify, create and maintain firebreaks on forested steep slopes near structures		

Town of Esperance

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Work with the County to educate and assist property owners with flood prevention; such as elevation of properties and utilities, sewer backup protection, flood-proofing, extension of municipal sewer and water, and property acquisition - especially along Schoharie and Fly Creeks		
Work with the County to inventory floodplain structures and educate/assist floodplain property owners with flood protection measures; such as elevation of properties and utilities, sewer backup protection, flood-proofing, extension of municipal sewer and water, and property acquisition Priority areas identified for elevation/acquisition projects include: Priddle Camp along Schoharie Creek, which consists of a cluster of single-family homes that were originally constructed as seasonal camps. Over the past few decades a majority of the camps have been improved into year round residences. After the January 1996 floods, several homes were elevated above the base flood elevation. Several residences adjacent to Schoharie Creek at the closest approach to US Route 20 should be acquired/elevated.	Elevation of 1 floodprone property was completed in 2008 (HMGP)	Many homes in Priddle Camp 100% destroyed in August 2011. Complete ongoing HMGP floodplain acquisition projects – 8 properties
Evaluate and implement projects for stabilizing streambanks in locations where erosion threatens development and agriculture. Priority streams include Schoharie Creek near Cripplebush Creek and Fly Creek	Planning was initiated to address stream and bank stabilization in Fly Creek	

Completed or ongoing mitigation projects in Esperance include one (1) *Repetitive Loss Property*

Village of Esperance**Hazard Mitigation Initiatives and Projects**

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 11 residence in the special flood hazard area, including Steuben St., to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		Many floodplain properties destroyed in August 2011

Town of Fulton

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 36 structures in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted	Acquisition of 1 residential structure completed in 2006 (HMGP)	Complete ongoing HMGP floodplain acquisition projects – 5 properties
Inventory floodplain structures and educate/assist property owners with measures to protect existing development; such as elevation of properties and utilities, sewer backup protection and flood-proofing. A priority site for elevation/acquisition is on Pleasant Valley Road.		
Completed or ongoing mitigation projects in Fulton include one (1) <i>Repetitive Loss Property</i>		
Work with the County to identify, create and maintain firebreaks on forested steep slopes near structures. Priority areas are in the Eminence		
		<p>Communications Improvements</p> <ul style="list-style-type: none"> - Improved cellular communications will assist with flood protection planning and the protection of properties when a flood or other hazard occurs - Satellite phones for emergency communications
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Town of Fulton - continued		
Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Extension of municipal sewer and water, and related infrastructure improvements to reduce prevent flood losses		Redling Rd. connection to Clauverwie (approx.. 1 mile) to benefit Redling Rd. residents
Study, develop, and implement projects for stabilizing streambanks in locations where erosion threatens development and agriculture, particularly Pleasant Valley Creek	An earlier project to improve Redling Rd drainage and prevent erosion was completed	<p>Approximately 300 ft. of highway embankment on Pleasant Valley Rd. below the Baldwin property is settling/failing and the road needs to be realigned and/or reinforced (est. \$750,000 to \$1,000,000)</p> <p>Perform 0.2 miles of stream debris removal and streambank stabilization affecting Mill Valley/Line Creek from Church St. to first bridge(est. \$100,000)</p> <p>Perform 3.0 miles of stream debris removal and streambank stabilization in Pleasant Valley Creek (est. \$100,000)</p> <p>Stream gravel and stream stabilization work in Panther Creek, West Fulton (est. \$100,000 to \$150,000)</p>

Town of Gilboa

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 6 residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		Evaluate damage that occurred to residential structures on small streams in the 2011 flooding. These sites may be an addition to the 6 identified in 2006. Complete ongoing HMGP floodplain acquisition projects – 3 properties
Completed or ongoing mitigation projects in Gilboa include one (1) <i>Repetitive Loss Property</i>		
	Development and implementation of the Manorkill Stream Management Plan - 2009	Streambank stabilization at several locations on local creeks is needed to protect improved property and residences; including sites that will protect Keyserkill Rd., Shew Hollow Rd., Tabbi Rd., Dave Brown Mtn. Rd. and Stryker Rd. Estimate: \$1 - 2 million or more
Secure funding and design a project to eliminate existing landslides on Flat Creek Road in Town of Gilboa		Regular stream maintenance work on Schoharie Creek between dams Implement a large culvert inspection program and seek funding for culvert replacements Mitigate Beaver dams to prevent flooding Design and build a Town park that could also serve as a flood retention or diversion area

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Town of Gilboa - continued

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Work with the County to identify, create and maintain firebreaks on forested steep slopes near structures		
	A joint government and private sector project to provide cellular service in the south of the county has been initiated	Cellular phone antennas, signal coverage and access in Gilboa and other lower Schoharie communities is essential for providing emergency services and public safety
	An outdoor siren warning system was installed to alert residents of a dam failure emergency. The siren system is tested monthly	

Town of Jefferson

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 3 residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		
Develop and implement a strategy for replacing undersized bridges and culverts on public roadways and for access to private property. Possible projects include Mill Creek/Porter Road	Planning identified 12 sites that require bridge and culvert improvements: -Mill Creek/Porter Rd -North Harpersfield and Moxley Sts -North Harpersfield Rd -Clapper Hollow Rd at State Land -Allen Rd near Clapper Hollow Rd -West of the Clapper Hollow/Standard Rd Intersection -At Stannard Rd/Clapper Hollow Rd Intersection -Palmer Rd -Merchant Rd -Creamery St near Fire Dept. -Campo Rd -Sternberg Rd	
Work with the County to identify, create and maintain firebreaks on forested steep slopes near structures. Priority area is the Hamlet of Eminence		
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Town of Jefferson - continued		
Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
		Consider creating a riparian buffer zone to protect waterways and reduce flood potential Mitigate Beaver dams to prevent flooding

Town of Middleburgh

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate structures located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of the structure and utilities are warranted	Completed or ongoing mitigation projects in the Town of Middleburgh include seven (8) <i>Repetitive Loss Properties</i>	Complete ongoing HMGP floodplain acquisition projects – 8 properties
		Mitigate slope failure on Huntersland Road
		Mitigate Beaver dams that contribute to flooding

Village of Middleburgh

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Inventory floodplain structures and educate/assist property owners with measures to protect existing development; such as elevation of properties and utilities, sewer backup protection, flood-proofing, extension of municipal sewer and water, and property acquisition. Priority areas include Mill Lane, Baker Avenue, Dexter Avenue, Middlefort Road and River Street	Acquisition of 4 residential structure completed in 2007 and 2009 (HMGP and GCFRP)	Complete ongoing HMGP floodplain acquisition projects – 6 properties
Completed or ongoing mitigation projects in the Village of Middleburgh include two (2) <i>Repetitive Loss Properties</i>		
Evaluate opportunities to alleviate village flooding by implementing upstream projects; such as wetland creation, retention systems and diversions. Possible projects include work affecting the Stony Creek watershed.	Planning was initiated to develop wetland rehabilitation areas, a possible retention pond and perform stream stabilization work in Stony and Gorge Creek -- 2009	Evaluate areas of wetlands, ponds, and streams where the installation of berms could reduce flooding (e.g. Indian Acres)
Study, develop, and implement projects for stabilizing streambanks in locations where erosion threatens development and agriculture. Priority streams include Schoharie Creek and Little Schoharie Creek		

Town of Richmondville

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted	Specific residences and structures were identified along Cobleskill Creek on Palmer Rd, and on Route 7 east of the I-88 interchange, and on Court St in Warnerville	
Encourage NYSDOT to implement projects identified in the Route 7 Corridor Transportation Plan to relocate and improve the Warnerville-Cut-off Road, and eliminate an at-grade railroad crossing, to avert road closures due to ice jams and flooding		

Village of Richmondville

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate and implement measures to protect the village reservoir from impacts associated with a hazardous material incident that could occur on the adjacent I-88 interstate highway		<ul style="list-style-type: none"> - NYS DOT and CP Rail must participate in planning with the Village and School district for reservoir protection - Consider using the I-88 diversion structure in protection planning - Prepare a written emergency response plan for the reservoir
Implement measures to prevent or mitigate landslides that could affect NYS Route 10	<ul style="list-style-type: none"> - NYS DOT has implemented periodic maintenance measures for the slope - NYS DOT analysis of slope protection measures is ongoing - Preparation of a slope Failure Traffic Re-Routing Plan is ongoing 	
Implement cooperative measures with the Bear Gulch Lake Homeowners Association to prevent and/or mitigate potential failure of the Bear Gulch Lake Dam in the Town of Summit		Bear Gulch Lake Dam Emergency Plan and notification procedures need to be reviewed and updated

Town of Schoharie

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Review Howes Cave quarry projects to determine impacts to underlying mines/caves. Support mining museum and education efforts to protect existing mines/caves		Coordinate with the Town of Cobleskill – only a small portion of the quarry is in Schoharie
Evaluate structures located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted	Completed or ongoing mitigation projects in the Town of Schoharie include one (1) <i>Repetitive Loss Property</i>	Prepare new elevation certificates for each structure in the 100 and 500 year flood zones that identify and promote flood mitigation actions that owners can take. Complete ongoing HMGP floodplain acquisition projects – 3 properties
Study, develop and implement projects for stabilizing streambanks in locations where erosion threatens development and agriculture, particularly Pleasant Valley Creek	Stream realignment and bank stabilization in Fox Creek - 2009	
		Improve evacuation route signs to make them visible at night, include radio station tuning information and consider billboards or related measures for public awareness

Village of Schoharie

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
<p>Evaluate residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of the structures and utilities are warranted. Property owners need assistance with measures to elevate properties and utilities, prevent sewer backup and perform flood-proofing. Priorities include properties on Karkendorf Road, Sunset Drive and Bridge Street along Schoharie Creek</p>	<p>After Hurricane Irene flooding of 2011, the village offered all property owners in the village an opportunity to participate in grant funded elevation and flood-proofing programs.</p>	
<p>Evaluate opportunities to acquire properties subject to repetitive flood loss and convert the site to open space</p>	<p>After Hurricane Irene flooding of 2011, the village offered 21 property owners the opportunity to participate in grant funded acquisition. 7 property owners have agreed to participate and applications are being processed</p>	<p>Complete ongoing HMGP floodplain acquisition projects – 7 properties</p>
<p>Completed or ongoing mitigation projects in the Village of Schoharie include two (2) <i>Repetitive Loss Properties</i></p>		
<p>-- continues on the next page --</p>		

Village of Schoharie - continued		
Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Study, develop, and implement projects for stabilizing streambanks on Schoharie Creek where erosion threatens development and agriculture		
Evaluate opportunities to extend municipal sewer and water services to prevent flooding Prepare plans and implement improvements for stormwater and drainage system management		<ul style="list-style-type: none"> - Evaluate improvements for the Wastewater Treatment Plant collection system (I&I reduction) - Protect Wastewater Treatment Plant with a flood protection berm - Install a generator for the Fair Street Lift Station - Improve the water treatment and distribution system by replacing asbestos cement water mains and replacing undersized and aged water mains, replacing Young’s Spring intake line, improving pre-treatment, and replacing the 1940s water tank - Install manhole inserts to prevent surface water intrusion - Storm drainage improvements on Clear Spring Brook from southern source to Schoharie Creek (Hilgert Parkway stormwater pumping station, Village french drains) - Drainage improvements east of Route 30 between Furman Dr and Quilt La - Stormwater and drainage system planning - Obtain NFIP Community Rating System (CRS) designation
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Village of Schoharie - continued		
Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
	Prepared a Long-Term Community Recovery (LTCR) Draft Action List that includes hazard mitigation measures (see right column)	<ul style="list-style-type: none"> - Inventory lands and buildings - Community marketing analysis - Enhance community partnerships - Prepare a Flood Preparedness and Mitigation Plan - Reduce local flood insurance premiums and meet FEMA requirements for Community Rating System status - Flood hazard and mitigation awareness initiatives - Update local floodplain law - Encourage development outside of floodplains - Housing Needs and Assessment Plan - Update land use and regulatory laws - Develop a capital improvement plan - Housing rehabilitations and floodproofing - Become a LEEDS certified community (Leadership in Energy and Environmental Design)

Town of Seward

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 5 residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted	Evaluation has identified 3 residences as priorities and only one floods regularly	
Study, develop, and implement projects for stabilizing streambanks in locations where erosion threatens development and agriculture	Stream realignment and bank stabilization in West Creek - 2009	
Secure funding and design project to eliminate existing landslide on Patrick Road	<ul style="list-style-type: none"> - Active landslides have resulted in closure of the road at the slide location, there are safety issues related to the bridge and one residence is at risk to landslide damage - A geo-technical study of this site was prepared that identifies recommendations for mitigation - FEMA grant funding was sought but improvements have not been funded 	

Town of Sharon

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 14 residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		
Inventory floodplain structures and educate/assist property owners with measures to protect existing development; such as elevation of properties and utilities, sewer backup protection and flood-proofing. Priority area is Engleville Rd.		
Evaluate opportunities to extend municipal sewer and water services to prevent flooding	Water and sewer expansion for commercial development - 2009	Evaluate the scope and risks of flooding that occurred on Route 20 as a result of the Hurricane Irene in 2011
Evaluate opportunities to acquire properties subject to repetitive flood loss and convert the site to open space. Priority area is Engleville Rd.		

Village of Sharon Springs

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 25 structures located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		
Village water infrastructure needs to be updated	Water and sewer expansion for commercial development - 2009	Replace deteriorating water tanks (approx. 350k to 500k)
		Repair several storm drains (approx. 45k)
		Dredge shallow reservoir (approx. \$1 million)
		Permeable paving of DPW driveway and lot to prevent flooding

Town of Summit**Hazard Mitigation Initiatives and Projects**

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 2 residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		
Implement cooperative measures with the Bear Gulch Lake Homeowners Association to prevent and/or mitigate potential failure of the Bear Gulch Lake Dam in the Town of Summit		
Identify, create and maintain firebreaks on forested steep slopes near structures. Priority area includes Eminance		

Town of Wright

Hazard Mitigation Initiatives and Projects

Continuing Projects and Goals Established in the 2006 Plan	Activities and Projects Completed Since 2006	New Hazard Mitigation Projects and Goals Identified in 2013
Evaluate 33 residences located in the special flood hazard area to determine if property acquisition, or the elevation and flood-proofing of structures and utilities are warranted		
Study, develop, and implement projects for stabilizing streambanks on Fox and King Creeks where erosion threatens development and agriculture	Stream realignment and bank stabilization in Fox Creek - 2009	
	Grant funds requested to install an emergency generator at the town hall	
		Seek funding to prepare a stream management plan for the town

E. Process for Developing Hazard Mitigation Goals and Objectives

Selecting Hazard Mitigation Actions

Preparation of mitigation goals and objectives were based on the findings and analysis of the Hazard Analysis outlined in Section III, Risk Assessment, a review of the Hazard Profiles in Section IV and the Vulnerability Assessment in Section V. After a review of the hazard specific facts, records and data associated with each objective, the following issues related to each of the proposed mitigation actions were considered.

- Technical and engineering
- Legal and environmental
- Resources and funding exist or are potentially available
- Public interest exists or can be attained
- Political support exists or can be organized

Emergency Response Proposals

Several of the objectives included in the Schoharie County Hazard Mitigation Plan target improvements for emergency services and enhancements of disaster response capabilities. These kinds of projects include improvements for emergency communications, hazardous materials response equipment, plus evacuation and landslide route planning. FEMA, however, no longer considers emergency response projects to be hazard mitigation measures, and more narrowly defines mitigation as the steps taken to prevent a disaster, or actions that will reduce the impact of a hazard when it occurs. Schoharie County has nonetheless determined that the proposed emergency response improvements and objectives should be part of this Hazard Mitigation Plan for the following reasons.

- They represent emergency preparedness actions that will significantly improve public safety in the community.
- It consolidates emergency preparedness goals into a single document providing a comprehensive strategy for community protection.
- The proposals will enhance public participation and acceptance of the Hazard Mitigation Plan, because they are widely recognized actions and important to local citizens, emergency responders, elected officials and community leaders.

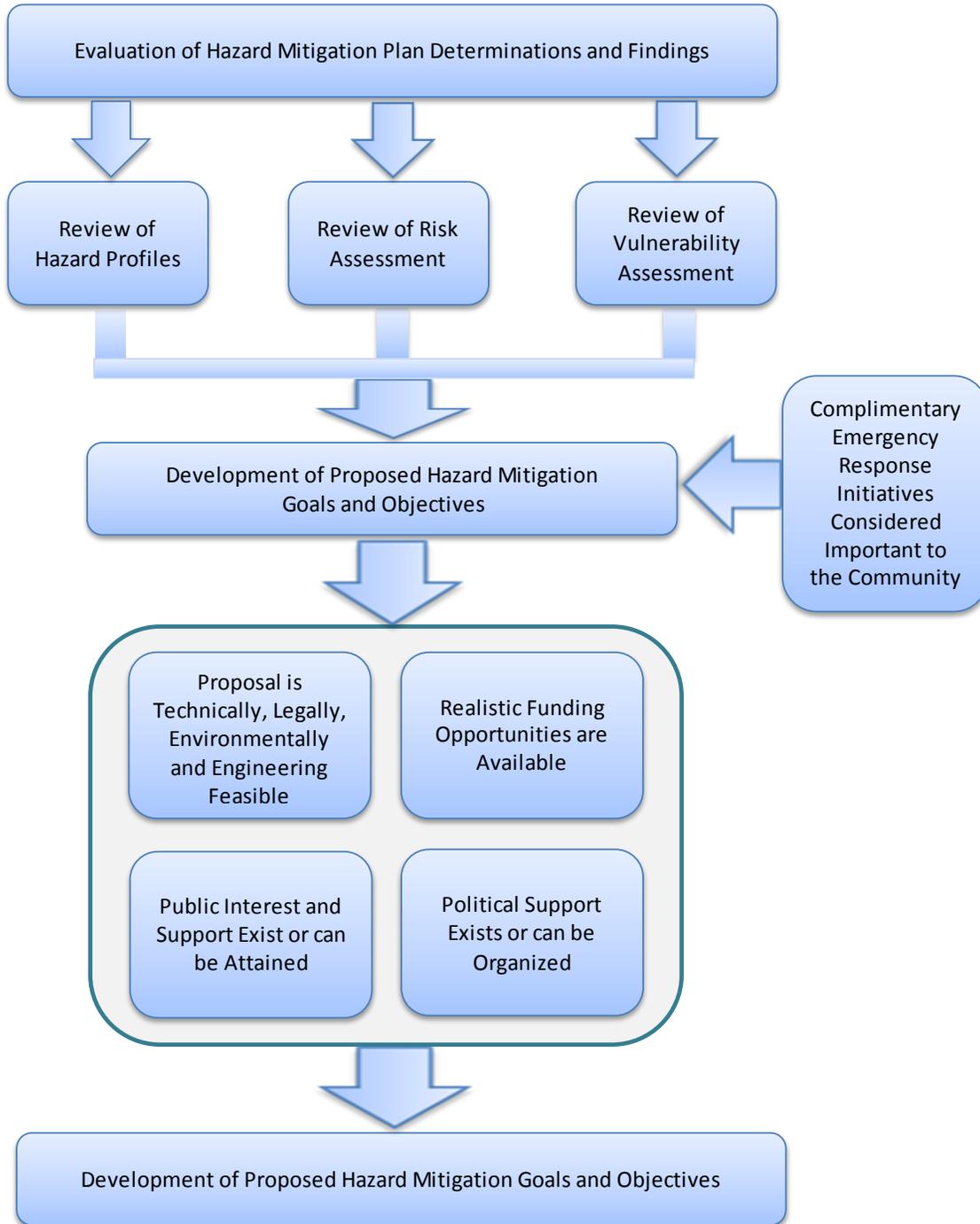
Prioritizing Hazard Mitigation Actions

The process for developing and selecting hazard mitigation actions described in this section does not include ranking or prioritization of hazard mitigation proposals. FEMA recommends applying a method for prioritizing mitigation actions and suggests using the Social, Technical, Administrative, Political, Legal, Economic, Environmental (STAPLEE) analysis tool.

As noted above, the process applied by Schoharie County to develop and select hazard mitigation actions considers the same issues that would be evaluated in the STAPLEE analysis, but there was consensus among the Steering Committee and planning participants that ranking or prioritizing mitigation actions could be counterproductive and make it difficult to implement important objectives. It was determined that ranking and prioritization of hazard mitigation actions was not appropriate in this instance for the following reasons.

- Identifying high priority objectives can result in diminishing the importance of other objectives
- It can be more difficult to mobilize funding and resources needed to insure implementation of lower priority, but still important goals
- It could contribute to complacency and lack of commitment toward achieving lower priority objectives
- As a multi-jurisdiction plan, many participating jurisdictions have specific mitigation actions that are a high priority to only their jurisdiction
- Priorities differ among the plan's functional participants. Epidemic goals are a high priority among Public Health officials, but less important for police and fire, who might rate terrorism goals higher
- Priorities are often determined by the resources and funding available at a given time. If funding or resources become available to address a hazard mitigation goal, it will heighten everyone's efforts to advance the project, while an otherwise high priority project might be delayed for years until resources are mobilized

Process for Developing Hazard Mitigation Goals and Objectives



F. Hazard Mitigation Assistance (HMA)

FEMA's Hazard Mitigation Assistance (HMA) grant programs provide funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages. As of the date this hazard mitigation plan was prepared FEMA administered the following HMA grant programs:

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)
- Repetitive Flood Claims (RFC)
- Severe Repetitive Loss (SRL)

FEMA's HMA grants are provided to eligible applicants (States/Tribes/Territories) that, in turn, provide subgrants to local governments and communities. Applications are received and administered by the State; and then submitted to FEMA for review, consideration and funding. Most grants require a local or non-federal cost share. Prospective applicants should contact the Schoharie County Emergency Management Office for further information regarding specific program and application requirements. Also visit the state and federal websites at:

<http://www.dhSES.ny.gov/oem/mitigation> -- or -- fema.gov.

1. HMA Grant Programs

The HMA grant programs provide funding opportunities for pre- and post-disaster mitigation. While the statutory origins of the programs differ, all share the common goal of reducing the risk of loss of life and property due to natural hazards. Brief descriptions of the HMA grant programs can be found below. For more information on the individual programs, or to see information related to a specific Fiscal Year, please click on one of the program links.

Hazard Mitigation Grant Program (HMGP) HMGP assists in implementing long-term hazard mitigation measures following Presidential disaster declarations.

Pre-Disaster Mitigation (PDM) PDM provides funds on an annual basis for hazard mitigation planning and the implementation of mitigation projects prior to a disaster. The goal of the PDM program is to reduce overall risk to the population and structures, while at the same time reducing reliance on federal disaster funding.

Flood Mitigation Assistance (FMA) FMA provides funds on an annual basis so that measures can be taken to reduce or eliminate risk of flood damage to buildings insured under the National Flood Insurance Program (NFIP).

Repetitive Flood Claims (RFC) RFC provides funds on an annual basis to reduce the risk of flood damage to individual properties insured under the NFIP that have had one or more claim payments for flood damages. RFC provides up to 100% federal funding for projects in communities that meet the reduced capacity requirements.

Severe Repetitive Loss (SRL) SRL provides funds on an annual basis to reduce the risk of flood damage to residential structures insured under the NFIP that are qualified as severe repetitive loss structures. SRL provides up to 90% federal funding for eligible projects.

2. Hazard Mitigation Assistance (HMA) -- Project Eligibility

The HMA Mitigation Activity Eligibility chart lists eligible mitigation activity types for the HMA grant programs, as of September, 2009. A checked box (√) indicates activity eligibility under a program. A grayed box indicates activity ineligibility under a program. Submission of an eligible activity type does not guarantee an award by FEMA.

HMA Mitigation Activity Eligibility

Eligible Activities	HMGP	PDM	FMA	RFC	SRL
Mitigation Projects	√	√	√	√	√
Property Acquisition and Structure Demolition	√	√	√	√	√
Property Acquisition and Structure Relocation	√	√	√	√	√
Structure Elevation	√	√	√	√	√
Mitigation Reconstruction					√
Dry Floodproofing of Historic Residential Structures	√	√	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√	√	
Minor Localized Flood Reduction Projects	√	√	√	√	√
Structural Retrofitting of Existing Buildings	√	√			
Non-Structural Retrofitting of Existing Buildings and Facilities	√	√			
Safe Room Construction	√	√			
Infrastructure Retrofit	√	√			

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HMA Mitigation Activity Eligibility (continued)

Eligible Activities	HMGP	PDM	FMA	RFC	SRL
Soil Stabilization	√	√			
Wildfire Mitigation	√	√			
Post-disaster Code Enforcement	√				
5% Initiative Projects	√				
2. Hazard Mitigation Planning	√	√	√		
3. Management Costs	√	√	√	√	√

Last Modified: Sept. 2009