
Section VI Hazard Mitigation Strategy, Goals and Objectives

201.6(c)(3)

A. Hazard Mitigation – Strategic Priorities

- Take advantage of development and funding opportunities when available to address, eliminate, or reduce hazards when appropriate.
- Pursue hazard mitigation activities that are the most cost-effective at limiting or reducing hazards.
- Promote cost-effective hazard mitigation projects that have the most significant opportunity to eliminate and reduce hazards.
- Seek and invest in mitigation opportunities that will reduce or limit overall, long-term costs to governments and property owners.
- Pursue mitigation solutions and activities that are consistent with other planning goals in the county to promote sustainable and managed growth.
- 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.
- Encourage mitigation measures that manage development and protect natural features in sensitive areas; such as those with steep slopes, vistas, waterfronts, forested and conservation areas.
- 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 quality.
- 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

Yates County and its municipalities have demonstrated a commitment to hazard mitigation that has resulted in many improvements beginning decades ago. 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 Yates County and its municipalities will be continued in the future:

1. Flooding and Landslides

After Agnes caused significant destruction in 1972, flood mitigation efforts became a goal of Yates County officials. Flood control systems on Keuka Lake existed before 1972, but were not adequate to control the floodwaters of Agnes. After the flood, these control structures were restored to pre-disaster condition, but not heightened or strengthened to provide further protection. State and local initiatives were begun after the 1972 flooding to improve flood protection in the Keuka Lake watershed, including the Keuka Lake Outlet to Seneca Lake. The largest of the projects was the rebuilding of six control gates along the Keuka Outlet in Penn Yan.

Since the 1972 flooding, each impacted jurisdiction and the Yates County Emergency Management Office have implemented local procedures to monitor storm runoff and visually inspect local streams and creeks as a flood hazard warning measure. Yates County and several municipalities have also completed numerous stream and roadbank protection projects, such as placing rip rap and enlarging drainage systems to improve flow capacity. Stream maintenance and clearing of storm debris are also high priorities for local governments in Yates County. Projects to protect roads, bridges and properties from flood damage are regularly scheduled and funded in local highway budgets. In recent years, municipalities have actively sought mitigation and other grant funds to improve areas susceptible to flood damage.

When purchasing new public works equipment, many towns and the County Highway Department now consider needs for multi-functional equipment - including dump trucks, excavators, bulldozers and wood chippers - recognizing that effective flood fighting capabilities are a critical resource in local inventories. After recognizing how important the repair of erosion and flood damaged soil is to preventing even further flood losses, the County Highway Department purchased a hydro-seeder several years ago. Soon after, the county, several towns and the County Soil and Water Conservation District combined funding to purchase a second unit. The Soil and Water Conservation District also owns a bail mulcher, and has modified other equipment that is available to each of the towns to help with flood prevention projects. For example, the County modified the design of their excavator, which allows it to be operated more effectively when filling gabion baskets and placing rip rap. These and other shared resources are used by the Soil and Water Conservation District and local municipalities to undertake mitigation projects; including improvements to wetlands, construction of flood retention, debris removal and ditching. As part of their maintenance programs each year, the Towns and County are replacing culvert pipes, expanding catchbasins, strengthening road shoulders and

armoring bridges. Local highway and public works budgets vary among the municipalities, but each spends from \$30,000 to \$500,000 annually, much of it directed at hazard mitigation related measures. All municipalities use a portion of their New York State CHIPS funding for flood mitigation projects as well.

County and municipal legislative bodies have also taken non-structural mitigation measures, such as adoption of local laws and regulations governing development in flood plains and hazard sensitive areas. Section V of this plan outlines zoning, steep slope, floodplain and related ordinances – plus the creation of conservation and agricultural districts and storm water management activities – which are directed at managing development that impacts flooding and other hazards. Most recently, Yates County implemented a number of preparedness actions that led to designation as a ‘*Storm Ready*’ community by the National Weather Service. The improvements put in place as part of the ‘*Storm Ready*’ program will protect lives and property by providing better warning and information to residents and businesses of possible or imminent flooding.

Other local and watershed management initiatives that target flood mitigation include:

- The **Town of Barrington** completed a town wide culvert inventory and evaluation in 2010 that summarizes culvert conditions, requirements and actions needed that will improve drainage and limit flood damage.
- The **Town of Italy** completed a Culvert Inventory and Assessment and identified priority roads, including Brink Hill, Parish Hill and Shay Roads that require drainage improvements to reduce food hazards. This evaluation formed the basis of the Towns hazard mitigation objectives that follow in Section, C. Hazard Mitigation Goals and Objectives for the Future.
- The **Town of Italy** working cooperatively with the Canandaigua Lake Watershed Committee, is funding and scheduling an engineering study to propose drainage improvements and flood mitigation in the steep slope area above Sunnyside Road.
- The **Town of Middlesex** completed an engineering study (see Appendix 5) that identifies areas of critical safety concern related to flooding and erosion on South Lake Road. The study outlines site-specific proposals and cost estimates to improve road and bank stability, retaining walls, culverts, drainage and other safety measures in the steep slope terrain adjacent to Canandaigua Lake.
- Monitoring and evaluation of stormwater runoff affecting **Keuka Lake** is a continuous and ongoing process involving multiple jurisdictions that border the lake, as well as Yates and Steuben counties, the Soil and Water Conservation Districts and the New York State Department of Environmental Conservation. Such efforts focus on impacts of development in the watershed and appropriate management strategies, including stormwater detention.

2. Severe Storms

With implementation of the *'Storm Ready'* program and the cooperation of the American Red Cross, there has been a significant increase in public hazard awareness activities throughout Yates County. Storm preparedness initiatives that include Family Emergency Plans and preparing a Family Emergency Kit have been widely distributed throughout the county. The County also participates in two Hazardous Weather Awareness Week initiatives each year sponsored by the National Weather Service. With cooperation of the media, local residents are educated about the warning signs of severe weather, how to access important weather safety announcements and notifications, and the proper procedures to take when storms occur.

3. Epidemics

The Yates County Public Health Department is a “partial service” department offering annual flu and pneumonia vaccination clinics to the public. They also provide well-baby vaccinations for low-income residents and public STD services. The County and the community hospital participate in a disease and illness surveillance program that was instituted after 9-11 through the Finger Lakes Office of Surveillance and Epidemiology. This program is designed to quickly identify an outbreak of illness or disease associated with chemical or biological exposures.

4. Terrorism

Yates County and its municipalities are in compliance with federal and state requirements for terrorism preparedness. The Penn Yan Aero /Yates County Airport has implemented security measures required by the FAA and Department of Homeland Security, including installation of a new fence around the property. The Villages of Dundee, Penn Yan and Rushville have upgraded systems and procedures to protect their municipal water systems. First response agencies have improved security and accountability of their equipment and uniforms, and access to facilities is more tightly controlled. The County Public Health Department and hospital have complied with health surveillance regulations and continue with planning and training to improve homeland security protection. Yates County maintains a Weapons of Mass Destruction equipment cache trailer from New York State that is regularly inventoried and ready for service.

5. Hazardous Materials

Yates County has an active Local Emergency Planning Committee that maintains a response plan and assists local industry, businesses and other users of chemicals with site planning and spill prevention. There is cooperation with the Finger Lakes Solid Waste Authority’s “Household Hazardous Materials Day” that assists residents with free disposal of chemical products. Volunteer firefighters are trained in hazardous materials response, including petroleum spills, and have limited equipment to dike and absorb spills. They also conduct joint training and site planning with industries and chemical users in their districts.

6. Transportation Accidents

Law enforcement agencies in Yates County provide road patrols that monitor and regulate traffic and transit according to New York State laws. The Yates County Sheriff chairs the local traffic safety board, which includes representatives of other state and local law enforcement agencies, and promotes coordinated traffic planning and enforcement in the county. The NYS Department of Transportation, Yates County and local jurisdictions served by State Route 14A recently completed a study and plan to address transportation safety concerns on this primary north/south county corridor. The plan sets priorities for reducing transportation accidents on Route 14A and identifies a number of suggested safety improvements.

C. Hazard Mitigation Goals and Objectives for the Future

201.6(c)(3)(i)(ii)

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 Yates 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 compliment the Hazard Mitigation Goals listed in Part A of this section. The Hazard Mitigation proposals included in this section have been organized based on the specific hazard they are intended to address or mitigate, and reflect one or more of the following generally accepted types of hazard mitigation solutions.

- * **Standards and Regulations:** 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.

Note: For an evaluation of how the following goals and objectives are related to the findings of the Risk and Vulnerability Assessment in Sections IV and V, see Part D that follows in this section.

1. FLOODING and LANDSLIDES

GOAL: Minimize losses and impacts to life and property due to flooding and landslide related to flooding

OBJECTIVE #1: Implement economically feasible and environmentally appropriate flood control and mitigation efforts in area streams

Also see Flooding: Objective #10 - Road and Culvert Drainage

TIME FRAME: Ongoing

FUNDING: Existing budgets and mitigation grants when available.

LEAD: Each town and the Yates County Soil and Water Conservation District

SUPPORT: Yates County Highway, YC Emergency Management, NYSDEC, USACOE, USDA, FEMA

Table 6-1 Proposed Projects – Objective 1 Flooding and Landslides

Jurisdiction	Stream/Creek	Project Description	Areas/Sites	Cost Estimate
Barrington	Big Stream	Erosion Control and Cleaning	Chubb Hollow Crystal Springs	Medium \$100,000 - \$500,000
Benton	Kashong	Runoff and spillway improvements to prevent sediment and debris buildup that result in Seneca Lake shore damage		Medium \$100,000 - \$500,000
Jerusalem	Streams along East Bluff Drive North End Bank	Streambank retaining walls to protect roads, water and sewer		Medium \$100,000 - \$500,000
	Stream along East and West Bluff Drives	Debris removal		Low Less than \$100,000
		Stream bank stabilization	Guyanoga Valley	Low Less than \$100,000

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Jurisdiction	Stream/Creek	Project Description	Areas/Sites	Cost Estimate
Middlesex	Streams along West Av	Retaining walls and rip-rap to protect West Av	West Valley	Low Less than \$100,000
	Streams and hillside runoff along South Lake Road and Canandaigua Lake	Multiple sites and projects have been identified on South Lake Rd where erosion and bank restoration, and improved drainage are required to mitigate flooding in steep slope areas. The town has completed an engineering study (see Appendix 5) that identifies areas of concern, proposed improvements and estimated costs. Also see Objective #10 Road and Culvert Drainage	Canandaigua Lake east hillside	High \$1 to \$2 million
		Also see Objective #10 Road and Culvert Drainage		
Starkey	Big Stream	Breakwall to prevent erosion	Glenora Point Seneca Lake	TBD
Torrey	Keuka Outlet	Floodplain management improvements	Floodplain Route 14	High More than \$500,000
Dresden	Streams on Anthony Rd. and Arrowhead Beach Rd	Stream shaping, streambank stabilization and Rip-Rap		Low Less than \$100,000
	Breakwall at end of Seneca St	Breakwall restoration to improve public safety and access	Seneca St Seneca Lake	High More than \$500,000
Dundee	Big Stream	Streambank and erosion control to prevent damage to sewer	From Bridge St east to village park	Medium \$100,000 - \$500,000
	Big Stream collector	Erosion control to protect ditch and street	Vine St	Low Less than \$100,000
	Big Stream collector	Erosion control to protect street and improved property	Stoll St	Low Less than \$100,000
	Big Stream watershed	Detention Pond**	Dundee-Himrod Road	Low Less than \$100,000
	Big Stream watershed	Control flooding and high water, or elevate the structure and/or critical facilities at Well Building #1	Dundee-Himrod Road	Low Less than \$100,000

Objective #1 targets mitigation measures for both flooding and landslides. Landslides in Yates County are the result of heavy rain events and associated with flood risks. Severe storms and rain create high velocity flows on upland streams and natural drainage-ways; which undermine isolated pockets of earth and rock on steep slopes.

Mitigation actions for landslides are related to mitigation actions established for flooding and are consistent with the recommendations noted in the USGS report: *The Landslide Handbook – A Guide to Understanding Landslides, 2008, Circular 1325*. In preparing or identifying future mitigation actions associated with this objective, the mitigation solutions outlined in the USGS handbook should be reviewed and considered.

See: <http://pubs.usgs.gov/circ/1325/>

OBJECTIVE #2: Create a public education program for residents to encourage support for stream and waterway improvements that mitigate flooding and landslides

- TIME FRAME: To be determined
- FUNDING: Existing budgets and grants when available
- LEAD: Yates County, Town of Benton
- SUPPORT: Other towns and municipalities, NYSDEC, Soil and Water Conservation District, YC Emergency Management, Cornell Cooperative Extension
- COST: Low to Medium – up to \$150,000

Proposed Project

Yates County would like create a stream information book for landowners and municipalities, explaining how buffers and greenways can be used to reduce flood damage, and explain the “do’s and don’ts” of stream maintenance and natural resource protection. This kind of education will prevent future damage by reducing inappropriate development in flood prone areas and by discouraging detrimental behaviors by landowners, such as throwing debris in streams or removing rocks and soil that serve as bank protection. The publication would be targeted to those living along creeks, streams, the outlet and the three Finger Lakes to promote protective practices along all county water resources.

OBJECTIVE #3: Create public education programs and seek public input for preventive legislation to improve actions and practices that prevent debris disposal, waste and stormwater runoff that are harmful to natural resources and public water supplies

- TIME FRAME:** When funding becomes available
- FUNDING:** Grants when available
- LEAD:** All Municipalities, Yates County
- SUPPORT:** Soil and Water Conservation District, YC Emergency Management, Cornell Cooperative Extension, NYS DEC, NYS Agriculture and Markets, USDA
- COST:** Low to Medium – Up to \$150,000

Proposed Project 1

Public education program, particularly for higher density residential areas where yard debris is placed at the roadside, is needed to help manage collection and proper disposal of debris. During rain events, residential debris washes into and clogs storm sewers and creates “urban flooding”, as was seen in the November 1996 flooding. Many municipalities have yard debris pick-up in the spring and fall, and some have applied local property maintenance regulations to help limit the problem. With additional funding, however, more aggressive and effective campaigns could be implemented and enforced to target critical areas and violators.

Proposed Project 2

The Town of Benton has proposed a public education program directed at farm and agricultural properties that would encourage better containment, treatment and/or management of farm waste and contaminated stormwater runoff. This could include better application of retention ponds, elimination of streamside feeding and other measures that protect natural resources and public water supplies. Countywide participation and application of this proposal could be considered as well.

OBJECTIVE #4: Secure funding to buy out properties in flood plains that pose repetitive loss problems, and raise or modify properties when cost efficient

- TIME FRAME:** When repetitive loss properties are identified and funding is available
- FUNDING:** Grants when available, possibly Federal or State funding if associated with flood control project creation
- LEAD:** Soil and Water Conservation District / Yates County
Legislature/Municipalities
- SUPPORT:** Highway, State and Federal Agencies

OBJECTIVE #5: Continue to support Environmental Emergency Services and the flood warning data they provide for Yates County and Keuka Lake

- TIME FRAME:** Ongoing
- FUNDING:** Existing budget and support of grants when EES applies
- LEAD:** Yates County Emergency Management
- SUPPORT:** County and Municipal governments

Continuing Project

Yates County and its municipalities will continue to support the efforts of Environmental Emergency Services (EES) and its Flood Warning Service, based in Corning, NY and sponsored by neighboring Steuben and Chemung counties. The data provided by the rain and river gauges that are maintained and monitored by the Flood Warning Service, and their ability to accurately predict storm runoff rates and lake crests, is extremely valuable to Yates County for local real-time flood warning and information. Predictions are based on current and local precipitation measurements and provide Yates County with notice of imminent flood threats that allow for early warning and activation of flood protection measures.

Objective #6: Maintain requirements and improve capabilities to retain the National Weather Service ‘Storm Ready’ designation for Yates County

TIMEFRAME:	Ongoing
FUNDING:	Existing budgets and future grants when available
LEAD:	YC Emergency Management
SUPPORT:	National Weather Service
COST:	Low – less than \$100,000

Continuing Project

Yates County earned the National Weather Service ‘Storm Ready’ designation in 2009. Several preparedness, warning, communications and organizational requirements must be maintained to assure continuing recertification by NWS as a ‘Storm Ready’ community.

Proposed Project

To improve efforts to remain ‘Storm Ready’, Yates County plans a campaign to encourage residents and businesses to purchase NOAA Weather Radios. These radios will provide better warning and preparedness information to residents for flooding and severe storms, thereby reducing injury and protecting property. The NOAA radio provides the quickest means for hazardous weather warnings, particularly during flash floods or severe storms, when warning time may only be minutes. In the past, the Yates County Legislature provided funding to purchase almost one hundred NOAA weather radios for distribution to fire departments, ambulance corps, highway departments, schools, children’s camps, county departments, hospitals, nursing facilities and other organizations.

OBJECTIVE #7: Create legislation and programs that will promote “best practices” that provide incentives, funding and platforms to implement local flood and landslide prevention measures

- TIMEFRAME:** Five years
- FUNDING:** Current budgets or grants for projects, none needed to enact legislation
- LEAD:** County and Municipal government
- SUPPORT:** Soil and Water Conservation District, YC Emergency Management

Proposed Project 1

Consider legislation that would provide county and local incentives for property owners that implement mitigation measures the County and municipalities would like to encourage. This could include tax incentives for landowners that leave buffers or green areas along streams, and for landowners that allow storm water projects to be built on their property for the protection of downstream residents. Creation of special drainage/stream tax districts to fund stream maintenance and other flood mitigation improvements in vulnerable areas could be also considered. Other opportunities for landowners include the construction of flood attenuation wetlands for the reduction of flooding, reducing erosion, streambank protection, improvement of water quality, groundwater conservation and enhancement of wildlife habitat.

Proposed Project 2

Develop an inter-municipal mutual aid plan the permits jurisdictions to share resources and funding to address improvements for storm water management in areas adjoining or spread across municipal and county boundaries. This should include a shared resource strategy where municipalities can pool resources and funding to achieve stream debris clearance and maintenance needs. The Town of Italy has identified that this is a project they would support.

OBJECTIVE #8: Complete LIDAR database for Yates County

TIMEFRAME:	LIDAR must be done in the fall when there are no leaves and snow
FUNDING:	Grant money, State member item or other funding must be available to implement LIDAR
LEAD:	County GIS Committee, Soil and Water Conservation District
SUPPORT:	Municipalities, County, New York State
COST	\$100,000

Continuing Project

Yates County has a Geographical Information System (GIS) database that includes information on soils, tax maps and land use from current and past aerial photos. This data is used to develop watershed models for zoning and land use decisions, design regional storm water projects and give better information to municipal boards that make land use decisions. Application of this GIS system and database was valuable in development of this Hazard Mitigation plan and provides data to support many community planning and decision making initiatives.

Proposed Project

The Yates County Soil and Water Conservation District is seeking funding to collect LIDAR (Light Imaging Detection and Ranging) topographic data for the entire county. Currently, the only area included is the Canandaigua Lake Watershed, which covers approximately 25% of the county. This airborne laser technology enables development of a digital topographic data layer with one-foot contours and will result in better designs of stormwater best-management practices. The availability of LIDAR topographic data will facilitate the design of wetlands for flood attenuation and other purposes by reducing the expense of field surveys. LIDAR topographic data will dramatically increase the accuracy of hydrology models that predict stormwater runoff velocities and quantities. It is anticipated that once LIDAR topographic data is available, the NYS Department of Environmental Conservation will use the information to develop updated digital Flood Insurance Rate Maps for Yates County. LIDAR topographic mapping and aerial photography can also be used to improve site planning and storm water management for development projects.

OBJECTIVE #9: Provide technical assistance to municipalities for more effective planning and legislation regarding land use, zoning and the application of other development and regulatory practices that can reduce hazards related to flooding, landslides and stormwater management

- TIMEFRAME:** As soon as possible
- FUNDING:** Mitigation and community planning grants when available
- LEAD:** County and Municipal Governments, Soil and Water Conservation District, Yates County Planning
- SUPPORT:** Regional planning Agency, NYS Department of State, NYS Association of Towns, NYSDEC

All municipalities in Yates County adhere to the New York State Building Codes and enforce these codes through municipal Code Enforcement Officers. However, towns and villages in Yates County need further assistance in creating more effective zoning and land use regulations, help in gaining public support to enact such regulations and further assistance in enforcing these laws. Technical assistance for identifying floodplains and flood prone areas must be completed first, along with education for town and village officials, so that new regulations and laws are properly applied and enforced. All municipalities need assistance to develop and implement storm water management programs consistent with the requirements of their MS4 permits. Many components of these storm water programs will require additional staff time and expertise to implement, as current staffing is not sufficient and they do not always have the special knowledge or experience to accomplish these goals. This is an area where municipalities could work cooperatively to reduce costs for planning and implementation.

OBJECTIVE #10: Complete a comprehensive evaluation of mitigation improvements needed for area street and highway drainage to prevent flood and landslide damage, and complete projects using prioritized local maintenance funds, grants or other funding

Also See Flooding: Objective #1 - Stream Projects

- TIMEFRAME:** As soon as possible, when funding becomes available
- FUNDING:** Existing budgets may fund a portion of costs if supplemented by grants, state or federal funds
- LEAD:** Highway Superintendents in all municipalities

SUPPORT: Municipal Governments, Yates County Highway, Soil and Water Conservation Service

Planning Project

Complete a comprehensive evaluation of mitigation improvements needed for area street and highway drainage to prevent flood damage. Local governments need help in targeting priority sites, preparing a scope of work for projects, estimating costs and identifying funding. Project organization, planning and grant preparation are important steps in successful implementation of flood mitigation projects, but they remain areas where the small local departments in Yates County need help because of their limited staff and technical resources. This evaluation should result in a prioritized schedule of flood prevention work in the county and each municipality, include a scope of work for targeted projects, estimate project costs, identify potential funding sources and determine where local governments can obtain help and resources to prepare grants.

This objective targets mitigation measures for both flooding and landslides, because insufficient or inadequately designed drainage is a contributing factor in low-land inundation and upland slope failure. Landslides in Yates County are the result of heavy rain events and associated with flood risks. Severe storms and rain create high velocity flows on upland streams and natural drainage-ways; which undermine isolated pockets of earth and rock on steep slopes.

Mitigation actions for landslides are related to mitigation actions established for flooding and are consistent with the recommendations noted in the USGS report: *The Landslide Handbook – A Guide to Understanding Landslides, 2008, Circular 1325*. The study and evaluation targeted by this objective should consider the proposed mitigation solutions outlined in the USGS handbook when developing further flood and landslide mitigation actions.

See: <http://pubs.usgs.gov/circ/1325/>

Proposed Projects

In the preparation of this Hazard Mitigation plan, participating jurisdictions have identified the following projects in Table 6-2 below that would reduce hazards, costs and damages associated with flooding of areas streets, roads and storm drainage systems. The study or evaluation targeted by this objective will be used to identify projects for other communities not specifically listed; including Jerusalem, Milo, Starkey and Dundee.

Table 6-2 Proposed Project Objective 10 – Flooding and Landslides

Jurisdiction	Road/Street/Site	Project Description	Cost Estimate
Barrington	Townwide	Culvert Replacement	Medium \$100,000 - \$500,000
	Townwide	Steep Hill Ditch Rocking and Rip-Rap	Medium \$100,000 - \$500,000
Benton	Rasmussen Road Swamp	Replace and increase size of culvert	Low Less than \$100,000
	Flat Street	Improve culvert that crosses the road and remove culvert from under railroad tracks, separating and redirecting flow to the creek	Low Less than \$100,000
	Simonsen Road	Combine the south and north side culverts at the outlet and extend further downstream to create more road shoulder	Low Less than \$100,000
Italy	Parish Hill Rd * Lower Wolven Rd Donley Rd Brink Hill Rd* Shay Rd* Keysor Rd Wood Hill Rd Hill View Rd Warren Rd South Hill Rd Sunnyside Rd Sliter Rd Flint Rd West Rd * Highest Priorities	Pave 20.82 miles of unpaved town roads that are on steep slopes. Roads have high washout potential, a history of flooding and damage results in costly impacts to the town and citizens.	High \$1.6 million or greater Parish Hill and Shay project is 4.43 miles Preliminary estimate is \$400,000 Other sites are estimated at approximately \$20K or more each
		Improve ditching and drainage on 24 miles of these roads. Replace old and undersized road and driveway culverts with up to 36-inch culverts to mitigate repeated washouts and flooding. This project is integrated with Objective #11. Also see Flooding: Objective #11 Dirt Road Upgrades and Site identification report in Appendix 5	

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Table 6-2 Proposed Project - Objective 10 Flooding and Landslides (continued)

Jurisdiction	Road/Street/Site	Project Description	Cost Estimate
Italy (Continued)	Burke Rd Pultney Rd Parish Rd Clute Rd	Replace and increase road culverts with sizes up to 72 inches. Install rip-rap and screening to prevent erosion	Low to Medium Up to \$150,000 (approx. 25K each)
	Italy Hamlet Pultney Rd	Examine issues impacting flooding in Italy Hamlet and develop a stormwater management plan for Pultney Rd	Low Less than \$100,000
	Various and Multiple town roads on steep slopes	Install signs and guardrails, and remove vegetation to improve safety	Medium \$100,000 - \$500,000
Middlesex	South Lake Road	An engineering study (Appendix 5) has identified 7 critical safety projects at multiple sites along South Lake Rd where improvements are needed to repair flood and erosion losses, address immediate safety hazards and prevent further damage. The projects include bank stabilization, retaining walls, culverts, drainage and other safety measures required to mitigate flooding and landslides in steep slope areas Also See Flooding: Objective #1 Stream Projects	High \$1 to \$2 million
	Wolfanger Road	Widen drainage ditch on entire road	Low Less than \$100,000
	Townline Road	Rock stabilization and ditches	Low Less than \$100,000
	West Av	Culvert replacements	Low Less than \$100,000
	Phelps Road	Replacement of bridge culvert to protect access to Fire and Highway Depts.	Low to Medium Up to \$150,000
Torrey	Perry Point Seneca Lake	Replace 3 aging and deteriorating culverts and increase size to 60'' or greater	Medium \$100,000 - \$500,000
	Long Point near Yates County Landfill	Replace 2 aging and deteriorating culverts and increase size to 60'' or greater	High More than \$500,000
Dresden	Village wide	Cleaning and installation of ditches and drywells	Low Less than \$100,000

Table 6-2 Proposed Project - Objective 10 Flooding and Landslides (continued)

Jurisdiction	Road/Street/Site	Project Description	Cost Estimate
Penn Yan	Sunset/Crescent Av Storm Sewer	Replace and increase size of culvert to meet capacity or associated 39 acre watershed, add sedimentation basin and retention pond	Medium \$100,000 - \$500,000 (if closed system)
	Clinton Street stone arch over Jacobs Creek	Repair aging arch that has deteriorated from large stormwater flows	Medium \$100,000 - \$500,000
	Keuka St Seneca St Sheppard St	Sanitary Sewer replacement for I & I occurring during heavy rain periods	Medium \$100,000 - \$500,000
Yates County	Plum Point Bridge	Increase capacity - Plum Creek	

Objective #11: Reduce flood/landslide costs and impacts by upgrading dirt roads to include oil and stone, install proper drainage and pave roads where appropriate

Also see Flooding: Objective #10 - Road and Culvert Drainage

TIMEFRAME: When funding becomes available

FUNDING: Existing budgets for a portion if supplemented by grants, state or federal funds

LEAD: Highway Superintendents in effected municipalities

SUPPORT: Municipal governments, state and federal Governments

Cooperative Project

Towns that still maintain dirt roads would like to have these roads oiled and stoned, and have proper drainage structures installed. If funding were available to complete these projects, the majority of the flooding problems would be removed. Each town would need to provide an estimate on the cost to oil and stone these roads and install the proper drainage structures. The towns routinely share rented equipment and contractors when undertaking road projects, and would work cooperatively in this project to ensure the most efficient completion for their money.

Table 6-3 Town of Italy Project

Road/Street/Site	Project Description	Cost Estimate
Parish Hill Rd Lower Woven Rd Donley Rd Brink Hill Rd Shay Rd Keysor Rd Wood Hill Rd Hill View Rd Warren Rd South Hill Rd Sunnyside Rd	Pave 20.8 miles of unpaved roads. Roads are on slopes with a history of washouts and pose a continuing flood damage threat that has significant safety and financial impacts on the town and citizens. This objective is integrated with Objective #10. Also see Flooding: Objective #10 Road and Culvert Drainage and Site identification report in Appendix 5	High \$ 1.6 million

2. SEVERE STORMS

GOAL: Minimize losses and impacts to life and property related to severe summer and winter storms

OBJECTIVE #1: Increase awareness and use of NOAA Weather Radios, including implementation of a discount purchase campaign	
Also See:	Flooding: Objective # 6 Proposed Project

TIMEFRAME: Within two years

FUNDING: None expected, grant funding if needed and available

LEAD: YC Emergency Management

SUPPORT: Local businesses and retail outlets, NW

Proposed Project

Encourage and provide incentives for residents and businesses to purchase or obtain NOAA Weather Radios. These radios will provide better warning and preparedness information to residents for flooding and severe storms, thereby reducing injury and protecting property. The NOAA radio provides the quickest means for hazardous weather warnings, particularly during flash floods or severe storms, when warning time may only

be minutes. In the past, the Yates County Legislature provided funding to purchase almost one hundred NOAA weather radios for distribution to fire departments, ambulance corps, highway departments, schools, children’s camps, county departments, hospitals, nursing facilities and other organizations.

OBJECTIVE #2: Create a cooperative tree maintenance program among the municipalities and NYSEG and bury utility lines when feasible

- TIMEFRAME: When funding becomes available
- FUNDING: Grants when available
- LEAD: Yates County, NYSEG
- SUPPORT: Municipalities

Proposed Project

Work cooperatively with New York State Electric and Gas Corporation (NYSEG) to devise a tree removal plan in road and utility rights-of-way. Highway Departments do not have the time, money or people to undertake tree trimming/removal projects, nor do they have the experience and training needed to work near power lines. A cooperative effort with NYSEG would allow enough staff and equipment to undertake such a project if funding were to become available. An alternative to removing trees is to bury utility lines when feasible and appropriate. This project, due to the cost involved, may need to focus on new installations, not existing utilities.

OBJECTIVE #3: Assist municipalities with timbering regulations to prevent runoff, reduce fire load and help manage hazardous debris

- TIMEFRAME: Within five years
- FUNDING: None expected, existing budget or grant funding if needed
- LEAD: Yates County, NYS DEC
- SUPPORT: Municipalities

Yates County, with assistance from New York State Forest Rangers would like to assist municipalities in creating timbering regulations, so that runoff is better controlled, road and utility rights-of-way are cleared, and fire loads (fire caused by lightning strikes) can be lessened.

OBJECTIVE #4: Research cooperative buying and storage programs for de-icing materials and construction of sand and salt storage facilities where possible

- TIMEFRAME:** Within five years for research and solution possibilities
- FUNDING:** Existing budgets for a portion if supplemented with grants or State/Federal funding
- LEAD:** Highway Supervisors, Municipal Governments
- SUPPORT:** NYS, Federal Governments

Cooperative Project 1

Cooperative buying and storage programs for de-icing materials. Another serious issue facing the County and its municipalities is a lack of available de-icing materials and the money to purchase and store these materials. De-icing is important for reducing winter hazards for citizens and motorists. And, due to salt rationing and the lack of cinders, communities should be considering the use of products that would be more effective and economical than sand or gravel.

Cooperative Project 2

Some towns do not have properly enclosed storage facilities for salt and de-icing materials. There are economic, conservation and environmental benefits to proper storage of these materials and several communities need to upgrade their facilities to better store and protect the materials. For example, the Town of Italy currently stores road salt in an open area behind the Town Highway building, where it is unprotected from weather and poses a runoff hazard to nearby Flint Creek.

Town of Starkey Project

Construct a sand and salt storage facility that will improve safety and travel during severe winter storms and reduce salt runoff to protect natural resources. Cost: Low/Medium – up to \$125,000

OBJECTIVE #5: Develop a plan for obtaining and distributing food and medicine supplies to facilities and rural residents that maintain only short duration food and medicine inventories or lack food preparation capabilities and transportation to obtain supplies

TIMEFRAME: Within five years

FUNDING: Depends on solutions suggested

LEAD: YC Emergency Management

SUPPORT: Red Cross, Office of the Aging, Social Services, businesses, religious groups, community services

Proposed Project

Develop a plan for obtaining and distributing food and medicine supplies to facilities and rural residents. Based on local experience in 1993 blizzard, many residents were without power for several days, while poor visibility and road conditions made it impossible for residents to get to shelters, and it was difficult to deliver food to shelters.

OBJECTIVE #6: Evaluate possible solutions for increasing the amount of portable emergency power for each municipality

TIMEFRAME: Within five years

FUNDING: Depends on solutions suggested

LEAD: YC Emergency Management

SUPPORT: NYSEMO and NYS Office of Homeland Security

Planning Project

Evaluate requirements and develop a strategy to identify generator needs and obtain funding to purchase and install generators at key facilities

Town of Potter Project

Obtain and install an emergency generator at the Phelps Road Town Hall and Community Center. Cost: Low – less than \$100,000

3. EPIDEMIC

GOAL: Minimize losses and impacts to life and public health related to the exposure and spread of contagious diseases and health hazards

OBJECTIVE #1: Continue county participation in the Finger Lakes Office of Surveillance and Epidemiology program

TIMEFRAME: Ongoing

FUNDING: Existing budget when needed, possible grant use in future for updates to the system

LEAD: Yates County Public Health Dept.

SUPPORT: Hospitals, NY State Dept. of Health (NYSDOH)

This program is a data and information sharing network that can quickly identify the spread of numerous diseases or identify illness trends. It is assumed that if a disease or illness is quickly identified, the spread of the disease or illness can be prevented.

OBJECTIVE #2: Continue vaccination clinics for flu, pneumonia, childhood immunizations and other preventable diseases

TIMEFRAME: Ongoing

FUNDING: Existing funds, use of grants in future if needed

LEAD: Yates County Public Health

SUPPORT: NYSDOH, EMO

Yates County Public Health Department will continue activities to immunize and vaccinate citizens for contagious diseases when feasible and medically advised.

OBJECTIVE #3: Lobby New York State to plan for health care mutual aid resources, exceptions to licensing regulations and authority for quarantine to effectively implement emergency health care services

- TIMEFRAME:** Lobbying efforts are ongoing
- FUNDING:** None expected, existing funds or grants if needed
- LEAD:** Yates County Public Health
- SUPPORT:** NYSDOH, YC Emergency Management

Yates County would like to see State legislation and planning to facilitate mutual aid, shared resources and services with other counties and bordering states in the event of an epidemic. There needs to be clear and specific rules regarding when a quarantine of an individual/household can be ordered, and who has the authority to enforce the quarantine. The County would like to create a database of medical personnel that has retired or moved into administration, but can still use their medical skills accurately and efficiently. The county has developed plans for contagious disease management, as well as mass vaccination and treatment facilities, but the process demands more personnel than are available locally. There are many retired nurses, doctors and other health care providers with the necessary skills that could be used during an emergency, if the State would allow them to work using streamlined application of current professional license procedures.

OBJECTIVE #4: Create an agreement with Finger Lakes Health to use their facility and services to support emergency health care activities during an epidemic

- TIMEFRAME:** As soon as possible
- FUNDING:** None expected
- LEAD:** Yates County Public Health
- SUPPORT:** YC Emergency Management, Yates County Attorney, NYS Dept. of Health

Yates County has participated with Finger Lakes Health in preparation of the county Contagious Disease Response Plan, and local agreements exist to use a portion of their facility in a widespread outbreak. However, the County Public Health Director would like to have a more formal agreement in place that outlines partnering responsibilities, liabilities and commitments - including how the flexible capabilities of the facility can be applied to meet the changing demands of an epidemic.

OBJECTIVE #5: Research grant opportunities to fund training programs for food service workers to insure food is handled and prepared in ways that will prevent disease transmission

TIMEFRAME: As soon as possible

FUNDING: None expected for research, grants when available for training

LEAD: Yates County Public Health

SUPPORT: YC Emergency Management, NYSDOH, Local food/beverage and grocery establishments

The Yates County Public Health department would like funding to conduct training for restaurant, tavern, and grocery store employees on prevention of disease transmission. Based on a history of incidents in Yates County involving food/water borne illnesses transmitted by employees, Public Sanitarians would like to see the training programs reinstated.

4. HAZARDOUS MATERIALS

GOAL: Minimize losses and impacts to life, public health and property, and provide greater protection for emergency responders related to exposure and contamination of hazardous materials and substances

OBJECTIVE #1: Educate the public and business community about proper hazardous materials storage and disposal, continue disposal programs, and promote needed legislation and training programs

TIMEFRAME: Ongoing and as soon as possible

FUNDING: Existing budgets, grants when available

LEAD: Yates County LEPC, Cornell Cooperative

SUPPORT: Municipalities, Local Industry

Yates County would like to create and deliver an educational program for residents and businesses regarding the safe storage and disposal of hazardous materials, and continue to support the efforts of the Finger Lakes Solid Waste Authority in this task. Local

municipalities should also create zoning laws that would manage land uses in a way that will protect ground water, streams and water bodies from hazardous materials. Actions are also needed to continue joint planning and training between local hazardous material users and the local fire department to remain in compliance with all laws and regulations regarding hazardous materials handling, storage and disposal.

OBJECTIVE #2: Lobby for tougher hazardous materials release laws, enforcement and penalties

TIMEFRAME: As soon as possible
FUNDING: None expected
LEAD: YC Emergency Management, LEPC
SUPPORT: Sheriff, NYS DEC

Yates County would like to see tougher laws and stricter enforcement for unscrupulous individuals that “park and dump” hazardous materials. Many hazardous material releases where fuel or other material is lost or spilled are related to intentional dumping of the load – or the load is allowed to leak while being hauled, or leaks while being transferred or coupled.

OBJECTIVE #3: Continue training of first responders and acquire specialized equipment and materials to safely and effectively respond to hazardous materials emergencies

TIMEFRAME: Ongoing
FUNDING: None locally, funding needed at State level.
LEAD: YC Emergency Management, LEPC
SUPPORT: NYS DEC

Local funding and budget limitations make it difficult to maintain the extent of technical training and specialized equipment needed to effectively respond to hazardous material emergencies

OBJECTIVE #4 : Educate the public on the proper procedures to take if a hazardous material is released near their location

- TIMEFRAME: Ongoing
- FUNDING: None expected, LEPC grant funding if needed
- LEAD: LEPC
- SUPPORT: YC Emergency Management, NWS

Yates County would like to implement a media campaign to educate the public on sheltering procedures should a hazardous materials release occur near their location. Information on evacuation/fleeing procedures and shelter in-place recommendations would also be included. Recently the National Weather Service added emergency categories for evacuations that can be used for NOAA Weather Radio alerts when a hazardous material emergency occurs. Education and a discount purchase program for NOAA Weather Radios for communities are also needed.

OBJECTIVE #5: Provide further training and equipment for first responders regarding Methadone labs and associated hazardous material risks

- TIMEFRAME: As soon as possible, when funding is available
- FUNDING: Grant money when available
- LEAD: YC Emergency Management, Sheriff, NYSP, local Law Enforcement agencies
- SUPPORT: Municipal Highway Officials, Code Enforcement, Fire Depts., EMS, OFPC

Yates County needs additional training for first responders and law enforcement officers regarding Meth labs and hazardous materials spills. Local training funds are limited and the training requires payment of overtime costs.

OBJECTIVE #6: Provide each fire department with hazardous materials response equipment, such as booms and pads for containing petroleum spills

- TIMEFRAME: When funding is available
- FUNDING: Grants when available
- LEAD: YC Emergency Management, Fire Coordinator
- SUPPORT: Fire Departments

Only a few fire departments currently have the equipment necessary to respond to even the most common spills involving petroleum. Each fire department needs a more comprehensive inventory of supplies and equipment for personnel safety, spill containment and environmental protection.

5. TERRORISM

- GOAL: Minimize losses and impact to life, public health and property related to the risks, exposure and affects of terrorism**

OBJECTIVE #1: Improve the Emergency Operations Center for Yates County and continue to incorporate state of the art equipment and resources needed to manage operations at the EOC

- TIMEFRAME: As soon as possible
- FUNDING: Grants or member item from State or Federal governments
- LEAD: YC Emergency Management
- SUPPORT: Yates County, NYS, Federal Governments

Yates County’s EOC has recently been upgraded but there is a need to properly stock/install specialized equipment to increase communications throughout Yates County.

OBJECTIVE #2: Obtain training and equipment for terrorism response, including interoperable communications technology for all responders and law enforcement agencies

- TIMEFRAME:** As soon as funding becomes available
- FUNDING:** Federal and State grants when available
- LEAD:** Sheriff, Law Enforcement Agencies
- SUPPORT:** YC Emergency Management, Municipalities

Yates County does not have an organized SWAT team and relies on the resources of Ontario County and the New York State Police. The Yates County Sheriffs Office (YCSO) recently received via the 2007 LETTP grant personnel protective equipment, to include soft & hard body Armor, ballistic helmets, shields and personnel bunkers. YCSO has had some basic terrorism and WMD instruction but any additional training would enhance their ability to share resources, gather intelligence and information. Due to overwhelming training requirements that already need to be met by law enforcement, this “added training” would require funding for training costs and overtime.

Objective #3: Partner with neighboring counties and lobby the State for more effective regulations regarding the use of medical personnel, and for more effective mutual aid plans

Also see Epidemic, Objective #3

- TIMEFRAME:** Ongoing
- FUNDING:** None expected, grants when available and needed
- LEAD:** Yates County Public Health
- SUPPORT:** YC Emergency Management, Adjoining Counties, NYSDOH

Yates County would like to create a database of retired medical personnel (nurses mainly) that could be called up for duty in a terrorist event. The State would have to make provision for experienced medical personnel to be put into service with a modified or expedited license process. Many retired nurses do not have current licenses, although they still have their skills and could be used during an event. Mutual aid plans for the region and a State mutual aid plan for public health are also needed to help effectively control the use of staff and the treatment of victims. As mentioned elsewhere in this plan, Yates County will receive an influx of residents from other counties in New York due to a lack of available services in their home counties, and the tourist and transient

population of Yates County must be served. The Yates County Public Health Medical Reserve Corp Unit was developed to assist Yates County Public Health in providing services to the citizens of this small rural county (population about 25,000). Membership in our MRC Unit includes both medical and non-medical volunteers, who can assist the community during emergencies, including disasters related to weather, disease and the environment. MRC volunteers would assist Yates County Public Health in receipt and distribution of SNS supplies, creation and operation of PODs, delivery of healthcare at shelters, maintenance of case investigation activities and continuity of department operations (COOP). During non-emergency periods, MRC volunteers will assist Yates County Public Health staff at rabies and influenza clinics and drills. Key partners in the volunteer corps include the entire emergency planning community; i.e. Emergency Management, Yates County Chapter of American Red Cross, local law enforcement, Soldiers and Sailors Memorial Hospital, Department of Social Services, local school districts and other community representatives. The MRC unit has recruited 137 medical and non-medical volunteers to date. Yates County Public Health leaders created MRC roles and positions that would provide MRC volunteers direction in assisting Public Health staff during emergency events and drills. Volunteers are welcome and encouraged to select specific jobs that meet their credentials and interests. The YCPH MRC handbook was created as a formal orientation program. MRC volunteers are used in the delivery of care during Point of Dispensing clinics and have participated in drills for several years. There are currently two volunteer coordinators and both participate on the Yates County Health Emergency Operations Planning Task Force and Yates County Public Health Emergency Preparedness Core Planning Team.

6. TRANSPORTATION ACCIDENTS

GOAL: Minimize losses and impacts to life and safety related to traffic and travel on area roads, rail and airports

OBJECTIVE #1: Continue to support current training activities and form a closer working relationship with Penn Yan AERO and the County Airport to deal with transportation accidents

TIMEFRAME: Ongoing

FUNDING: Existing budgets and grants when available

LEAD: Yates County, Municipal Governments

SUPPORT: Participating Committee agencies

Support the work of local transportation committees to implement safety and security measures at local airports. These committees evaluated needs, discuss priorities formulate proposals to coordinate airport improvements.

OBJECTIVE #2: Create media campaigns with safe driving messages appropriate to the season

TIMEFRAME: As soon as possible

FUNDING: Grants when available

LEAD: Sheriff, local Law Enforcement

SUPPORT: Yates County Public Information Officer, law enforcement agencies

Yates County Emergency Service providers would like to educate drivers and operators about features that are unique to areas communities that require special safety consideration on the highways; including common use of horse drawn vehicles, farm equipment, trailers, motorcycles and all-terrain vehicles (ATVs).

OBJECTIVE #3: There is need for variable message boards to improve highway safety when traffic is detoured due to disasters, emergencies and accidents

TIMEFRAME: As soon as possible

FUNDING: Grants when available

LEAD: Sheriff, local law enforcement

SUPPORT: Yates County Public Information Officer, law enforcement agencies

Use of variable message boards would improve highway safety when traffic is detoured due to disasters, emergencies and accidents; and they would reduce the need for police, traffic and highway personnel to manage sites and incidents, freeing them to address other essential tasks.

D. Evaluation of Relevant Hazards and Mitigation Goals

Section III, Risk Assessment describes how the Hazard Analysis (HAZNY) was used to evaluate 35 potential hazards that could impact Yates County. Based on the HAZNY rankings and factors outlined in Section III, it was determined that the following 12 hazards required a more detailed analysis to identify if, and to what extent, stronger mitigation measures were necessary or appropriate. Selection of these 12 hazards was based on factors related to hazard history, frequency, scope and vulnerability as applied by the HAZNY and the review outlined in Sections III.

Extreme Temperature	Tornado	Transportation Accident
Oil Spill	Landslide	Hazardous Materials – In Transit
Severe Winter Storms	Severe Storms	Hurricane / Tropical Storm
Ice Storms	Flooding	Utility Failure / Power Outage

A more complete and detailed evaluation of these 12 hazards and how they can affect Yates County is outlined in Section IV, Hazard Profiles and Section V, Vulnerability Assessment. These sections integrate hazard specific records and data for the 12 hazards; in part to provide a more detailed and accurate scope of the threats and impacts associated with clearly recognized hazards -- such as floods and storms – and to also determine the extent other potential hazards not typically experienced in Yates County – like terrorism and tornados – can or should be considered as hazard mitigation strategies are developed.

The hazard mitigation goals, objectives and actions included above (Section VI, C) address each of the 12 hazards analyzed in Sections IV and V. These Hazard Mitigation Goals and Objectives are organized into six groups; because in several cases, as noted in Table 6-3a below, a goal or objective targets mitigation requirements for more than one hazard, and goals addressing certain hazards will provide mitigation for other hazards because of their similarity and/or duplicity. Hazard mitigation goals and actions for these 12 relevant hazards are based on the findings of the hazard profiles and vulnerability assessment, combined with an examination of the kinds of resources and capabilities that are available to Yates County, thereby reflecting a commitment to realistic and achievable outcomes.

Table 6-3a Grouping of Goals and Objectives for Relevant Hazards

Hazard Mitigation Action Groups	12 Relevant Hazards	Applicable Objectives	Relationship to Mitigation Action Group
1. Flooding and Landslides	Flooding	Objectives 1 - 11	Landslides in Yates County are the result of heavy rain events and associated with flood risks. Inundating rains create high velocity flows on upland streams and natural drainage-ways; which undermine isolated pockets of earth and rock on steep slopes. Mitigation actions for landslides are related to mitigation actions established for flooding and are consistent with the recommendations noted in the USGS report: <i>The Landslide Handbook – A Guide to Understanding Landslides, 2008, Circular 1325.</i>
	Landslide	Objectives 1, 2, 5, 6, 7, 8, 9, 10, 11	
	Hurricane / Tropical Storms	Objectives 1 - 11	Once hurricanes and tropical storms move inland to Yates County, they become flood and/or severe storm events
2. Severe Storms	Severe Storms	Objectives 1, 2, 3, 5, 6	Most storm mitigation goals are applicable to storms in all seasons
	Severe Winter Storms	Objectives 1 - 6	
	Hurricane / Tropical Storms	Objectives 1, 2, 3, 5, 6	Once hurricanes and tropical storms move inland to Yates County, they become flood and/or severe storm events
	Ice Storms	Objectives 1 - 6	Ice storms impacts are mainly related to utility outages and downed debris that are also associated with severe storms
	Tornado	Objectives 1, 2, 3, 5, 6	Mitigation goals associated with severe storms are directly applicable to tornados
	Extreme Temperatures	Objectives 1, 5, 6 Also, Objective #6 under Goal 1, Flooding and Landslides	Extreme temperature events are not directly linked to severe storms, but extreme temperature mitigation goals center on improved warning, notification, public education and awareness, which are goals also applicable for severe storms.
	Utility Failure / Power Outage	Objectives 1, 2, 3, 5, 6	The Section IV Hazard Profile for utility and power outages demonstrates that most utility and power outages are related to severe storms and the mitigation goals prepared to address storms are also intended to mitigate utility and power outages

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Table 6-3a Grouping of Goals and Objectives for Relevant Hazards – continued

3. Epidemic	Objectives 1-5: The Hazard and Vulnerability Assessments completed in Sections III, IV and V did not rank epidemics among the 12 relevant hazards, primarily because of the rural and sparsely populated character of the county. Mitigation goals were included for epidemics, however, because of the exposure and risk Yates County has to regional and national epidemic threats.		
Hazard Mitigation Action Groups	12 Relevant Hazards	Applicable Objectives	Relationship to Mitigation Action Group
4. Hazardous Materials	Hazardous Materials	Objectives 1 - 6	
	Oil Spills	Objectives 1, 2, 3, 4, 6	In Yates County, oil spills are typically considered a hazardous material event
5. Terrorism	Terrorism	Objectives 1 -3	
	Utility Failure / Power Outage	Objectives 1 -3	Utility and power outages are commonly associated with terrorism events. Improvements that address terrorism will mitigate risks associated with utility and power outages
6. Transportation Accidents	Transportation Accidents	Objectives 1-3	

Table 6-3b Objectives Specific to Local Jurisdictions

Jurisdiction	Hazard Action Group	Objective #
Town of Barrington	1. Flooding and Landslides	1, 7, 8, 9, 10
	2. Severe Storms	2, 3, 4, 6
Town of Benton	1. Flooding and Landslides	1, 3, 8, 9, 10
	2. Severe Storms	2, 3, 4, 6
Town of Italy	1. Flooding and Landslides	7, 10, 8, 9, 10, 11
	2. Severe Storms	2, 3, 4, 6
Town of Jerusalem	1. Flooding and Landslides	1, 7, 8, 9, 10
	2. Severe Storms	2, 3, 4, 6
Town of Middlesex	1. Flooding and Landslides	1, 7, 8, 9, 10
	2. Severe Storms	2, 3, 4, 6
Town of Milo	1. Flooding and Landslides	7, 8, 9, 10
	2. Severe Storms	2, 3, 4, 6
Town of Potter	1. Flooding and Landslides	9, 8, 10
	2. Severe Storms	2, 3, 4, 6
Town of Starkey	1. Flooding and Landslides	1, 8, 9
	2. Severe Storms	2, 3, 4, 6
Town of Torrey	1. Flooding and Landslides	1, 8, 9, 10
	2. Severe Storms	2, 3, 4, 6
Village of Dresden	1. Flooding and Landslides	1, 8, 9, 10
	2. Severe Storms	2, 3, 4, 6
Village of Dundee	1. Flooding and Landslides	1, 8, 9
	2. Severe Storms	2, 3, 4, 6
Village of Penn Yan	1. Flooding and Landslides	9, 8, 10
	2. Severe Storms	2, 3, 4, 6

E. Process for Developing Hazard Mitigation Goals and Objectives

Selecting Hazard Mitigation Actions

As outlined in the following Figure 6-1, preparation of mitigation goals and objectives were based on the findings and analysis of the Hazard Analysis (Appendix 3), a review of the Hazard Profiles in Section III, the Risk Assessment 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 Yates County Hazard Mitigation Plan target improvements to emergency services and disaster response – which are critically important capabilities when a disaster occurs – and include projects related to emergency communications, hazardous materials response equipment and improvements to the Emergency Operations Center (EOC). 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. Yates 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

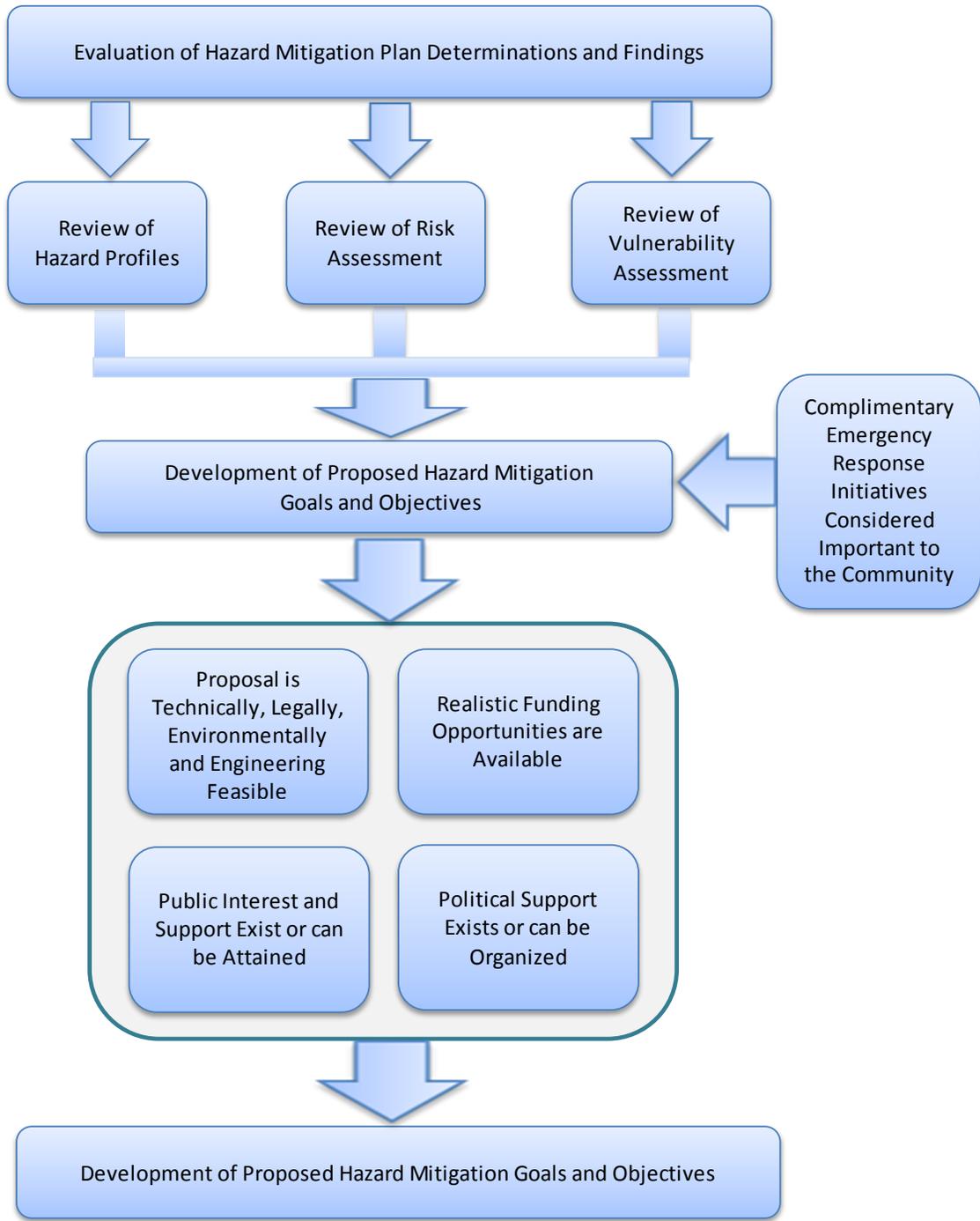
Prioritizing Hazard Mitigation Actions

The process for developing and selecting hazard mitigation actions described in this section and in the following Figure 6-1, does not include ranking or prioritization of hazard mitigation proposals. FEMA recommends applying a method for prioritizing mitigation actions and suggests using the STAPLEE analysis tool.

As noted above, the process applied by Yates 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

Figure 6-1 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 Yates 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.

Table 6-4 HMA Mitigation Activity Eligibility

Eligible Activities	HMGP	PDM	FMA	RFC	SRL
1. 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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Table 6-4 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	√	√	√	√	√

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