



## 9.1 LIVINGSTON COUNTY

This section presents the jurisdictional annex for the Livingston County. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the municipality and who in the County participated in the planning process; an assessment of the County’s risk and vulnerability; the different capabilities utilized in the County; and an action plan that will be implemented to achieve a more resilient community.

### 9.1.1 Hazard Mitigation Planning Team

The following individuals have been identified as the County’s hazard mitigation plan primary and alternate points of contact. The County followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many County departments, including: Central Services, County Clerk, Department of Health, Emergency Management, Highway, Information & Technology Services, Planning, Probation, Sheriff’s Office, Social Services, Veteran’s Services, and Workforce Development. The Emergency Management Director and the Deputy Planning Director represented the community on the Livingston County Hazard Mitigation Plan Planning Partnership, Steering Committee, and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.1-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Andrew Brodell, Director, Emergency Management 3360 Gypsy Lane, Mt. Morris, NY 14510 585-243-7160 <a href="mailto:abrodell@co.livingston.ny.us">abrodell@co.livingston.ny.us</a>	Heather Ferrero, Deputy Planning Director, Planning Dept. 6 Court Street, Geneseo, NY 14454 585-243-7550 <a href="mailto:hferrero@co.livingston.ny.us">hferrero@co.livingston.ny.us</a>

### 9.1.2 County Profile

Please refer to Section 4, Volume I of this Plan for details on Livingston County’s population, location, climate, history, growth, and development.

### 9.1.3 Jurisdictional Capability Assessment and Integration

The County performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities



- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community’s adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration and how risk reduction is supported. Areas with current mitigation integration are summarized in this jurisdictional Capability Assessment (Section 9.1.3). The County’s identified opportunities for integration of mitigation concepts to be incorporated into municipal procedures are included in the updated mitigation strategy.

### Planning, Legal, and Regulatory Capability

The table below summarizes the regulatory tools that are available to the County. Section 5 (Capability Assessment) provides an overview of the planning, legal and regulatory capabilities. The following table summarizes what is present in the jurisdiction and discusses if the mechanisms have been or could be leveraged to reduce risk.

**Table 9.1-2. Planning, Legal, and Regulatory Capability**

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>					
<b>Building Code</b>	Yes	Yes	New York State Uniform Fire Prevention and Building Code	State, County, and Local	County’s Code Enforcement Officer
<i>How does this reduce risk?</i> Provides building standards that protect the public health, safety, and welfare.					
<b>Zoning/Land Use Code</b>	No	No		Local	
<i>How does this reduce risk?</i> N/A					
<b>Subdivision Ordinance</b>	No	No		Local	
<i>How does this reduce risk?</i> N/A					
<b>Site Plan Ordinance</b>	No	No		Local	
<i>How does this reduce risk?</i> N/A					
<b>Stormwater Management Ordinance</b>	No	Yes		Local	
<i>How does this reduce risk?</i> N/A					
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	No			
<i>How does this reduce risk?</i> Livingston County has a Post Disaster Recovery Plan.					
<b>Real Estate Disclosure</b>	Yes	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.					
<b>Growth Management</b>	No	No		Local	
<i>How does this reduce risk?</i> N/A					
<b>Environmental Protection Ordinance</b>	No	Yes		Local	



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How does this reduce risk?</i> N/A					
<b>Flood Damage Prevention Ordinance</b>	No	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)		Local	
<i>How does this reduce risk?</i> N/A					
<b>Wellhead Protection</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Emergency Management Ordinance</b>	No	Yes			
<i>How does this reduce risk?</i> N/A					
<b>Climate Change Ordinance</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Other</b>		-			
<b>Planning Documents</b>					
<b>Master Plan</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Capital Improvement Plan</b>	Yes	No	Annually adopted Capital Improvement Plan	County	Administration
<i>How does this reduce risk?</i> Improves fiscal responsibility and transparency, and provides funding for projects that can be effective for pre-disaster mitigation					
<b>Disaster Debris Management Plan</b>	Yes	No	Livingston County Comprehensive Emergency Management Plan	County	Office of Emergency Management
<i>How does this reduce risk?</i> Provides for the safe and orderly clean-up of post-disaster debris, which protects the public health, safety, and welfare					
<b>Floodplain Management or Watershed Plan</b>	Yes	No	Conesus Lake Watershed Management Plan	County, Local	Conesus Lake Watershed Council, Livingston County Department of Health, and Planning Department
<i>How does this reduce risk?</i> Identifies recommendations for water quality improvement to a Class AA drinking water source – Conesus Lake					
<b>Stormwater Management Plan</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Open Space Plan</b>	No	Yes			
<i>How does this reduce risk?</i> N/A					
<b>Urban Water Management Plan</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Habitat Conservation Plan</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Economic Development Plan</b>	Yes	No	Livingston County Economic Development Strategic Plan	County	County Economic Development Department



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How does this reduce risk?</i>					
<b>Shoreline Management Plan</b>	No	Yes, in jurisdictions with CEHA areas	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas	Yes, in jurisdictions with CEHA areas	
<i>How does this reduce risk?</i> N/A					
<b>Community Wildfire Protection Plan</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Community Forest Management Plan</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Transportation Plan</b>	Yes	No	Livingston County Transportation Connectivity Plan	County	County Planning Department
<i>How does this reduce risk?</i> Provides recommendations for increased connectivity of residents to services and the orderly provision of public and private transportation services. Also provides recommendations for more efficient multi-modal connections.					
<b>Agriculture Plan</b>	Yes	No	Livingston County Agricultural & Farmland Protection Plan	County	County Planning Department
<i>How does this reduce risk?</i> Advocates for a strong agricultural economy and provides recommendations on preservation of viable agricultural lands					
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Tourism Plan</b>	Yes	No	Roger Brooks Livingston County Tourism Action Plan	County	Livingston County Development Corporation
<i>How does this reduce risk?</i> Promotes tourism growth and the protection and development of the County's tourism assets					
<b>Business/ Downtown Development Plan</b>	Yes	No	Livingston County Commercial District Analysis	County	Livingston County Development Corporation
<i>How does this reduce risk?</i> Promotes growth and enhancement to downtown districts in the County's Villages.					
<b>Other: Natural Resources Inventory</b>	Yes	No	2007	County	Livingston County Planning Dept.
<i>How does this reduce risk?</i> The County's NRI identifies and locates important natural resources in the County.					
<b>Response/Recovery Planning</b>					
<b>Emergency Operations Plan</b>	Yes	Yes	Livingston County Comprehensive Emergency Management Plan	County	County Office of Emergency
<i>How does this reduce risk?</i> The County's CEMP covers short-term response and long-term recovery to address communications, evacuation, and housing necessary for identified hazards					
<b>Strategic Recovery Planning Report</b>	No	No			
<i>How does this reduce risk?</i> N/A					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	Yes			
<i>How does this reduce risk?</i>					



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Post-Disaster Recovery Plan</b>	Yes	No	Livingston County CEMP	County	Office of Emergency Management
<i>How does this reduce risk?</i> Provides for the orderly and efficient response to post-disaster recovery operations.					
<b>Continuity of Operations Plan</b>	Yes	No	Livingston County CEMP	County	Office of Emergency Management
<i>How does this reduce risk?</i> This plan allows for the continuity of government in a disaster, which ensures the continual provision of emergency and governmental services to Livingston County residents in a disaster situation					
<b>Public Health Plan</b>	Yes	No	Community Health Improvement Plan	County	County Department of Health
<i>How does this reduce risk?</i> Provides recommendations to improve the health of Livingston County residents, with a focus on chronic disease prevention, well-being promotion, and prevention of mental and substance use disorders.					
<b>Other</b>	-	-			

### Development and Permitting Capability

The table below summarizes the capabilities of the County to oversee and track development.

**Table 9.1-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment
Do you issue development permits? <ul style="list-style-type: none"> <li>If yes, what department is responsible?</li> <li>If no, what is your process for development?</li> </ul>	No	Performed at the municipal level
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	
Do you have a buildable land inventory? <ul style="list-style-type: none"> <li>If yes, describe.</li> <li>If no, quantitatively describe the level of buildout in the jurisdiction.</li> </ul>	No	Land development is handled at the local municipal level.

### Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the County and their current responsibilities which contribute to hazard mitigation.

**Table 9.1-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	27-member advisory board to the Board of Supervisors on land use development issues, staffed by the County Planning Department
Zoning Board of Adjustments	No	
Planning Department	Yes	9-member staff involved in countywide mapping, Emergency Management mapping support, special projects, land use development, agricultural protection, transportation planning, Conesus Lake Watershed Management, technical assistance for municipalities and county departments, land bank support



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	The Livingston County Environmental Management Council is an advisory board to the Board of Supervisors for input on environmental issues. This board maintains the County's Natural Resources Inventory
Open Space Board/Committee	No	
Economic Development Commission/Committee	Yes	Livingston County Economic Development Department, Livingston County Industrial Development Agency, and Livingston County Development Corporation administer economic development programs in the county
Public Works/Highway Department	Yes	The Livingston County Highway Department has staff, equipment, and materials for the maintenance of the County's roadway system. The Highway Department works closely with the Office of Emergency Management in disaster situations and has engineers on staff
Construction/Building/Code Enforcement Department	Yes	The Livingston County Central Services Department is the Code Enforcement Office for Livingston County
Emergency Management/Public Safety Department	Yes	The Livingston County Office of Emergency Management coordinates emergency response in the County, runs disaster drills, arranges training on ICS and disaster response, and is a key agency for securing pre- and post-disaster mitigation grant funding
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department engages in maintenance of the County Highways on an annual basis
Mutual aid agreements	Yes	
Human Resources Manual	No	
Other		
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning Department, Highway Department, Department of Health - Environmental Health
Engineers or professionals trained in building or infrastructure construction practices	Yes	Highway Department, Central Services, and Department of Health
Planners or engineers with an understanding of natural hazards	Yes	Planning Department, Department of Health - Environmental Health, and Highway Department
Staff with expertise or training in benefit/cost analysis	Yes	Administration, Economic Development, Emergency Management, Highway Department, Planning Department
Professionals trained in conducting damage assessments	Yes	Highway Department, Office of Emergency Management
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Highway Department, Office of Emergency Management, Planning Department
Scientist familiar with natural hazards	No	
Surveyor(s)	Yes	Real Property Tax
Emergency Manager	Yes	Office of Emergency Management
Grant writer(s)	Yes	County Grant writer, most county departments
Resilience Officer	No	
Other (this could include stormwater engineer, environmental specialist, etc.)	No	

**Fiscal Capability**

The table below summarizes financial resources available to the County.





**Table 9.1-5. Fiscal Capabilities**

Financial Resources	Are these accessible or eligible to use for mitigation? (Yes/No) If yes, please describe. If no, can this be used to support in the future?
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

**Education and Outreach Capability**

The table below summarizes the education and outreach resources available to the County.

**Table 9.1-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? If yes, please describe.
Public information officer or communications office	Yes	The County has a Public Information Officer.
Personnel skilled or trained in website development	Yes	Livingston County has a website, and there is staff in most departments who are capable of updating and creating website information.
Is hazard mitigation information available on your website?	Yes	Yes. There are disaster preparedness webpages on the Department of Health and Office of Emergency Management websites.
Social media for hazard mitigation education and outreach	Yes	The County has an active Facebook, Instagram and Twitter accounts
Citizen boards or commissions that address issues related to hazard mitigation	No	
Other programs already in place that could be used to communicate hazard-related information	Yes	The Sheriff’s Office has a Reverse 911 alert system for alerting residents and visitors to emergencies or hazards (HyperReach)
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	The Sheriff’s Office Reverse 911 alert system is a mass alert system (HyperReach)
Natural disaster/safety programs in place for schools	Yes	Sheriff’s Office School Resource Officers
Other		

**Community Classifications**

The table below summarizes classifications for community programs available to the County.





**Table 9.1-7. Community Classifications**

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	N/A	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	
NYSDEC Climate Smart Community	No	-	
StormReady Certification	Yes	-	
Firewise Communities classification	Yes	-	
Other	-	-	

Note:

N/A Not applicable      NP Not participating      - Unavailable

### Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current capabilities to adjust to, protect from, or withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each hazard of concern and the jurisdiction’s rating.

**Table 9.1-8. Adaptive Capacity**

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Drought	Strong
Earthquake	Moderate
Flood	Strong
Hazardous Materials	Strong
Invasive Species	Moderate
Landslides	Strong
Mine Subsidence	Strong
Pandemic	Strong
Severe Storm	Strong
Severe Winter Storm	Strong
Terrorism	Moderate
Utility Failures	Moderate
Wildfire	Moderate

\*Strong Capacity exists and is in use

Moderate Capacity may exist; but is not used or could use some improvement

Weak Capacity does not exist or could use substantial improvement

### 9.1.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.



Table 9.1-9. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Livingston County	258	102	\$538,949.18	15	7	190
NFIP Topic			Comments			
<b>Flood Vulnerability Summary</b>						
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> <li>Do you maintain a list of properties that have been damaged by flooding?</li> </ul>			Low-lying properties in the Genesee River Valley, in the Canaseraga Creek Valley, and along Keshequa Creek in the 1% chance flood zone. Livingston County does not maintain a list of properties that have been damaged by flooding.			
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> <li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li> </ul>			Livingston County does not maintain a list of properties that are interested in flood mitigation at the County level.			
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>			No RiskMAP projects underway, though there is a FEMA Flood Risk Study kicking off in November 2021.			
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>			This is handled at the local level by the Floodplain Administrator. County OEM is also involved			
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>			Number not available at the county level. Handled at the local level.			
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>			No. 99% of the flood maps for municipalities are between 25 – 40 years old. There is a FEMA Flood Risk Study kicking off in November 2021.			
<b>NFIP Compliance</b>						
What local department is responsible for floodplain management?			This is handled at the local level by Floodplain Administrators			
Are any certified floodplain managers on staff in your jurisdiction?			Yes. Planning Department – Senior Planner			
Do you have access to resources to determine possible future flooding conditions from climate change?			Not aware of these resources being available.			
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>			Livingston County does not have a floodplain management program.			
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)			Livingston County maintains a publicly accessible internet mapping application that shows floodplains in the county (digital Q3 Flood Data).			
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?			Not applicable at the County level			
What are the barriers to running an effective NFIP program in the community, if any?			The lack of up-to-date flood maps is a significant barrier			
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, state the violations.</li> </ul>			No			
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?			The most recent CAV was in the Town of Conesus in 2016. The most recent CAC was in the Village of Geneseo in 2018.			
What is the local law number or municipal code of your flood damage prevention ordinance? What is the date that your flood damage prevention ordinance was last amended?			N/A Adopted by each municipality individually			



Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Livingston County	258	102	\$538,949.18	15	7	190
NFIP Topic			Comments			
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> <li>If exceeds, in what ways?</li> </ul>			N/A Administrated by each municipality			
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?			The County does not issue land use permits, but the County Planning Board reviews development through GML-239 and offers advisory comments to municipalities on avoiding development in floodplains and following local Flood Damage Prevention Laws.			
Does your jurisdiction participate in CRS? <ul style="list-style-type: none"> <li>If yes, is your jurisdiction interested in improving its CRS Classification?</li> <li>If no, is your jurisdiction interested in joining the CRS program?</li> </ul>			No.			

Source: Livingston County Planning Department, 2021

Notes:

RL Repetitive Loss; SRL Severe Repetitive Loss

### 9.1.5 Evacuation, Sheltering, Temporary Housing, and Permanent Housing

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

#### Evacuation Routes

Evacuation routes are described in Section 4.5.4 of this HMP.

#### Sheltering

The County established evacuation plans for each village and town, which includes sheltering. The plans include considerations for pets and individual with access and functional needs. Evacuation plans and routes are maintained in the County EOP and listed in Section 4.5.4 of this HMP.

#### Temporary Housing

Although the County does not currently maintain any temporary housing, it will investigate the feasibility of different locations in the County in the event of a disaster necessitating such housing. Priority locations for attention include parks, open spaces, and recreational sites; large parking lots; State Prison property; and residence halls at SUNY Geneseo (dependent on the time of year and mutual aid agreements with the University). A full list is provided in Section 4.5.4 of this HMP.

#### Permanent Housing

Although the County does not currently maintain any locations for post-disaster permanent housing location, it will investigate the feasibility of different locations outside of floodplains in the County in the event of a disaster necessitating such housing. The locations of possible sites are provided in Section 4.5.4 of this HMP.



### 9.1.6 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.1-10 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development, throughout the County. Overall, the county’s vulnerability due to new development has not changed. The change in vulnerability due to development in each municipality is identified in Sections 9.2 through 9.27.

**Table 9.1-10. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019		2020		2021	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)</b>														
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single Family	98	1	113	1	85	0	91	1	97	1	138	0	64	1
Multi-Family	1	0	1	0	6	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	94	1	97	0	100	1	100	1	99	0	113	0	155	0
<b>Total Permits Issued</b>	<b>193</b>	<b>2</b>	<b>211</b>	<b>1</b>	<b>191</b>	<b>1</b>	<b>191</b>	<b>2</b>	<b>196</b>	<b>1</b>	<b>251</b>	<b>0</b>	<b>219</b>	<b>1</b>
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development						
<b>Recent Major Development and Infrastructure from 2015 to Present</b>														
Avon Commons	Residential	10		Village of Avon		None		Townhouse/Commercial/Apts.						
Twin Cedars of Avon	Residential	40		Town of Avon, parcel 35-1-22.111		None		Upgrading older mobile homes						
Solar Field	Commercial	N/A		Pole Bridge Road and East Avon Road, Town of Avon		None		Solar panel field						
Solar Field	Commercial	N/A		500 Rochester Street, Town of Avon		None		Solar panel field						
Upstate Breaker	Commercial	1		1 Technology Place, Village of Caledonia		None		Approved by Planning & Zoning Boards						
Hammocks	Residential	17		Hammocks Drive, Town of Geneseo		None		Completed						
Gateway	Commercial	1		Gateway Drive, Town of Geneseo		None		Construction						
Steeplechase Phase 2	Residential	11/11		Steeplechase, Village of Geneseo		None		One remaining						
DePaul Apartments	Residential	60/6		Mustang Circle,		None		Complete						



Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Town of Nunda Highway	Commercial	1	1955 Hay Road (170.-1-70.51), Town of Nunda	None	Under construction 2021, completion expected October 2021
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
Broadband Expansion	Utility	--	Countywide	TBD	Proposed
East Avon Industrial Park	Commercial	2	Starkey Drive, Town of Avon	None	Proposed
Royal Springs	Residential	250/250	Athena Drive, Town of Avon	None	Proposed
Royal Springs Development	Residential	200	Town of Avon, parcel 45.-1-23.141	None	Would like to start Phase 2
Solar Field	Commercial	N/A	5406 Lake Road, Town of Avon	None	Proposed solar panel field
Solar Field	Commercial	N/A	5530 Wolcott Drive, Town of Avon	None	Proposed solar panel field
Horseshoe Solar	Commercial	solar panels	Town of Caledonia	Portion located in AE Flood Zone	Proposed/Under State review
DePaul Apartments	Residential	48 units	Franklin Plaza, Village of Dansville	None	Proposed
DePaul Apartments	Residential	12 units	Kings Daughters Home, Village of Dansville	None	Proposed
Hammocks Phase 4	Residential	56/14	Hammocks Drive, Town of Geneseo	None	Proposed
Steeplechase Phase 3	Residential	13/13	Steeplechase, Village of Geneseo	None	Subdivision Review in Process
Redevelopment of Livingston Correctional	TBD	TBD	Town of Groveland	Property has some AE Flood zone acreage	Planning phase
Solar Farm	Commercial	To be determined	Lattimer Road and Bailey Road, Town of Groveland	None	Proposed location
Solar Farm	Commercial	To be determined	6842 Groveland Hill Road, Town of Groveland	None	Proposed location



Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Solar Farm	Commercial	To be determined	Abele Road and Route 63/Mount Morris Genesee Road, Town of Groveland	None	Proposed location
White Creek Solar	Commercial	solar panels	Towns of Leicester & York	None	Proposed/Under State review
Morris Ridge Solar	Commercial	Solar panels	Town of Mount Morris	None	Proposed/Under State review
York Travel Center	Commercial	1	Main St/Genesee St, Town of York	None	Proposed

SFHA Special Flood Hazard Area (1% flood event)

\*Only location-specific hazard zones or vulnerabilities identified.

### 9.1.7 Jurisdictional Risk Assessment

The hazard profiles in Section 5 (Risk Assessment) provide detailed information regarding each plan participant’s vulnerability to the identified hazards. Refer to Section 5.2 (Methodology and Tools) and Section 5.4 (Hazard Ranking) for a detailed summary for the County’s risk assessment results and data used to determine the hazard ranking discussed later in this section. The hazard profiles in Section 5.3 (Hazard Profiles) show the hazard areas on maps. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the County has significant exposure. The maps also show the location of potential new development, where available.

### Hazard Event History

Livingston County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the county and its municipalities.

The County’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Livingston County. Table 9.1-11 provides details regarding municipal-specific loss and damages the County experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

**Table 9.1-11. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	Emergency Declaration?	Summary of Damages and Losses
2020 & 2021	COVID 19 Pandemic	DR 3434 and 4480	Provided in Section 5.3 (Hazard Profiles)
11/15/2020	High Wind	-	Provided in Section 5.3 (Hazard Profiles)
8/27/2020	Flash Flood	-	Provided in Section 5.3 (Hazard Profiles)
1/12/2020	Flood	-	Provided in Section 5.3 (Hazard Profiles)
11/1/2019	Flood	-	Provided in Section 5.3 (Hazard Profiles)





Dates of Event	Event Type (Disaster Declaration if applicable)	Emergency Declaration?	Summary of Damages and Losses
10/15/2019	Flood	-	Provided in Section 5.3 (Hazard Profiles)
10/27/2019	Flood	-	Provided in Section 5.3 (Hazard Profiles)
9/21/2018	Lightning	-	Provided in Section 5.3 (Hazard Profiles)
4/4/2018	Blizzard	-	Provided in Section 5.3 (Hazard Profiles)
7/20/2017	Tornado	-	Provided in Section 5.3 (Hazard Profiles)
3/8/2017	High Wind	-	Provided in Section 5.3 (Hazard Profiles)
9/9/2015	Thunderstorm Wind	-	Provided in Section 5.3 (Hazard Profiles)

Notes:

DR Major Disaster Declaration (FEMA) FEMA Federal Emergency Management Agency  
 EM Emergency Declaration (FEMA) N/A Not applicable

### Hazard Ranking and Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the County’s risk assessment results and data used to determine the hazard ranking.

#### Hazard Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the County, as shown in Section 5.4 (Risk Ranking).

Table 9.1-12. Hazard Ranking Input

Drought	Earthquake	Flood	Hazardous Materials	Invasive Species	Landslide	Mine Subsidence
Low	High	Low	High	Medium	Low	Low
Pandemic	Severe Storm	Severe Winter Storm	Terrorism	Utility Failure	Wildfire	
Medium	High	Medium	Low	High	Medium	

#### Critical Facilities

The table below identifies County-owned critical facilities located in the 1-percent and 0.2-percent floodplain.

Table 9.1-13. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Complies with NYS Standards	Addressed by Proposed Action
		1% Event	0.2% Event		
Long Point Sheriff Substation	Police Station	X	X	Yes	N/A – the substation is a road-ready mobile trailer that will be moved to higher ground outside of the SFHA when a flood event is forecast

Source: Livingston County Planning Partners 2021; HIFLD 2020

#### Identified Issues

After review of the County’s hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the County has identified the following vulnerabilities:

- Past flooding impacted the County highways. They had flooding, culvert washouts, and damage to road shoulders. The majority of the roads affected are in the southern part of the county.



- Flooding impacted the county bridges, especially along the Keshequa Creek. Erosion under the bridge supports, large deposits of gravel, and wood debris are a constant problem with the creek.
- Flooding impacts the East/West Lake Roads, Dacula Shores, Big Tree Road/Route 20A, and Joy Road along Conesus Lake. The flooding impacts the road infrastructure, personal property, and homes.
- Flooding impacts the water and sewer lift stations and pump stations along the East/West Lake Roads along Conesus Lake.

Specific areas of concern based on resident response to the Livingston County Hazard Mitigation Citizen survey include:

- |                                |                             |
|--------------------------------|-----------------------------|
| • Communication Outages        | • Subsidence/Ground Sinking |
| • Cyber Attacks                | • Pandemic                  |
| • Drought                      | • Power Outages             |
| • Earthquakes                  | • Severe Weather            |
| • Extreme Temperatures         | • Severe Winter Storms      |
| • Flooding                     | • Terrorism                 |
| • Hazardous Materials Releases | • Water/Sewer Outages       |
| • Invasive Species             | • Wildfires                 |

### 9.1.8 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

#### Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2015 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.1-14. Status of Previous Mitigation Actions

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success 1. Cost 2. Level of Protection 3. Damages Avoided; Evidence of Success	Next Steps 1. Project to be included in 2022 HMP or Discontinue 2. If including action in the 2022 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
CL-1	Develop materials and conduct education and outreach to work with farmers to implement best management practices (BMP) to address stormwater runoff from fields.	Flood, Severe Storm	None provided in the 2015 HMP	Soil & Water Conservation District	Ongoing	1. 2. 3.	1. Discontinue 2. 3. Ongoing capability
CL-2	Conduct a hydrilla management analysis to determine whether chemical treatments or the introduction of grass carp would be a more effective control measure.	Invasive Species	None provided in the 2015 HMP	County Planning Department	No Progress	1. 2. 3.	1. Discontinue 2. Because hydrilla has not been detected in the County's water bodies, this action would only be generated when there is a case of hydrilla in the County 3.
CL-3	Implement hydrilla control measures to prevent the further spread of the invasive species and to eventually reduce its impact on the County's water systems.	Invasive Species	None provided in the 2015 HMP	County Planning Department	No Progress	1. 2. 3.	1. Discontinue 2. Because hydrilla has not been detected in the County's water bodies, this action would only be generated when there is a case of hydrilla in the County 3.
CL-4	Support the mitigation of vulnerable structures via retrofit (e.g., elevation, flood-proofing) or acquisition/relocation to protect them from future damage; repetitive loss and severe repetitive loss properties should be a priority, when applicable.	Flood, Severe Storm, Wildfire, Winter Storm	None provided in the 2015 HMP	County Engineering	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. Assign to OEM. 3.
CL-5	Assess and prioritize feasible non-structural flood hazard mitigation alternatives for at-risk properties within the floodplain (including those that have been identified as repetitive loss) such as acquisition/relocation, or elevation. The parameters for feasibility for this initiative would include the following: funding, benefits versus costs, and willing participation of property owners. Implement as funding becomes available.	Flood, Severe Storm, Wildfire, Winter Storm	None provided in the 2015 HMP	County Engineering	In Progress	1. 2. 3.	1. Include in the 2022 HMP. 2. Assign to OEM. 3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success 1. Cost 2. Level of Protection 3. Damages Avoided; Evidence of Success	Next Steps 1. Project to be included in 2022 HMP or Discontinue 2. If including action in the 2022 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
CL-6	Encourage all jurisdictions in the County to maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements, floodplain identification and mapping, and flood insurance outreach to the community.	Flood	None provided in the 2015 HMP	County Planning Department	Ongoing	1. 2. 3.	1. Discontinue 2. 3. Ongoing capability
CL-7	Develop a coordinated stormwater management program for the Conesus Lake watershed and entire county to address storm and flood impacts.	All	None provided in the 2015 HMP	County Department of Health	In Progress	1. 2. 3.	1. Include in the 2022 HMP. 2. 3.
CL-8	Support each municipality in preparing a list of experienced HAM radio operators, mechanics, technicians, cooks, nurses, etc. so that in an emergency these people can take charge of rescue/recovery operations.	All	None provided in the 2015 HMP	Municipalities	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. Assign to OEM. 3.
CL-9	Encourage/lobby NY State Departments and Agencies to discount/reduce fees for license registrations for Emergency Response personnel, such as volunteer firefighters, ambulance workers, etc.	All	None provided in the 2015 HMP	County OEM	Ongoing	1. 2. 3.	1. Discontinue 2. 3. Ongoing capability
CL-10	Establish pipeline links to Monroe County (especially in the northern part of the county) and City of Rochester water supply systems. This would create redundancy/connection for emergency use.	All	None provided in the 2015 HMP	County Planning Department	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-11	Assist municipalities with the process of acquiring and providing backup power generators for key locations, including, but not limited, to town/village halls, police and fire stations, schools, airports/airstrips, and public buildings. This assistance can include administrative, logistical, and funding support.	All	None provided in the 2015 HMP	County Planning Department	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-12	Acquire new, more powerful, radios, walkie-talkies, etc.	All	None provided in the 2015 HMP	County Sheriff	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success 1. Cost 2. Level of Protection 3. Damages Avoided; Evidence of Success	Next Steps 1. Project to be included in 2022 HMP or Discontinue 2. If including action in the 2022 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
CL-13	Provide better communications for First Responder units.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-14	Set up a countywide tornado warning system.	Severe Storms, Tornadoes	None provided in the 2015 HMP	County OEM	Complete	Information not available 2. 3.	1. Discontinue 2. 3. Complete
CL-15	Establish mutual aid agreements with neighboring counties for their assistance in addressing county wide disasters.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-16	Install a reverse emergency management call system to contact residents (Reverse 911).	All	None provided in the 2015 HMP	County OEM	Complete	1. 2. 3.	1. Discontinue 2. 3. Sheriff's Office uses IPAWS (blast notification) and Hyper (direct dial) to reach people in qualifying circumstances
CL-17	Develop a standardized door tag that can be left on residents' doors when door-to-door notifications are necessary.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-18	Regulate special provision for backup supplies in the Emergency Management Plan.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-19	Provide security provisions and redundancies for telephone lines and power lines.	All	None provided in the 2015 HMP	County Sheriff	Ongoing	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-20	Upgrade security at the Hemlock Lake water treatment facility.	All	None provided in the 2015 HMP	City of Rochester	Ongoing	1. 2. 3.	1. Discontinue 2. 3. Not under the County's control.
CL-21	Secure hazardous materials on farms.	All	None provided in the 2015 HMP	Soil and Water	Ongoing	1. 2. 3.	1. Discontinue 2. 3. Ongoing capability
CL-22	Secure funding to alleviate staffing issues for Fire Departments and EMTs.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-23	Set up a "Welcome Wagon" program (based on former Conesus Lake	All	None provided in the 2015 HMP	County OEM	No Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success 1. Cost 2. Level of Protection 3. Damages Avoided; Evidence of Success	Next Steps 1. Project to be included in 2022 HMP or Discontinue 2. If including action in the 2022 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	program) to distribute information about disasters for new residents.						
CL-24	Involve community groups and local nonprofit organizations (Boy/Girl Scouts, etc.) with information distribution programs.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-25	Develop public education programs that follow the “Education without panicking” concept.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-26	Develop and disseminate routine public mailings/booklets to every home. Mailings should contain maps and information on shelters and disaster response.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-27	Develop a countywide strategy to address utility failures and protect vulnerable utilities during severe weather events.	Severe Storms, Winter Storms	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-28	Enhance the emergency notification system by providing NOAA Weather Radio Receivers to critical facilities.	Severe Storm	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-29	Officially encourage underground utilities. Develop and circulate model ordinances and policies.	Severe Storm; Severe Winter Storm	None provided in the 2015 HMP	County OEM	Ongoing	1. 2. 3.	1. Discontinue 2. 3. Ongoing capability
CL-30	Encourage/support the development of tornado shelters.	Severe Weather	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-31	Set design standards for water supply infrastructure and sewage facilities to prevent contamination during flooding.	Flood	None provided in the 2015 HMP	Department of Health	Ongoing	1. 2. 3.	1. Discontinue 2. 3. Ongoing capability
CL-32	Regulate building design and construction standards in municipal Flood Prevention Ordinances or Zoning Ordinances to reduce the impact of flooding on the built environment.	Flood	None provided in the 2015 HMP	County Planning Department	No Progress	1. 2. 3.	1. Discontinue 2. 3. Zoning and Flood Prevention Ordinances are regulated at the local level. Can be included in municipal annexes, if interested.
CL-33	Develop a flood mitigation program for flood-prone stretches of the Genesee River, Jaycox Creek, Keshequa Creek	Flood	None provided in the 2015 HMP	County Planning Department	In Progress	1. 2. 3.	1. Include in the 2022 HMP



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success 1. Cost 2. Level of Protection 3. Damages Avoided; Evidence of Success	Next Steps 1. Project to be included in 2022 HMP or Discontinue 2. If including action in the 2022 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	and Canaseraga Creek and the Conesus Lake shoreline area. These watercourses are the source of significant flooding and require special attention.						2. County Planning can coordinate with County Soil & Water Conservation District 3.
CL-34	Introduce erosion controls/stream and bank stabilization measures along specific flood prone watercourses, including Mud Creek, Mill Creek, Canaseraga Creek and Conesus Lake.	Flood	None provided in the 2015 HMP	County and municipal highway departments	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. County Planning can coordinate with County Soil & Water Conservation District 3.
CL-35	Build a diversion channel/canal to divert flood waters from the flood-prone village of Dansville.	Flood	None provided in the 2015 HMP	County Highway Department	No Progress	1. 2. 3.	1. Discontinue 2. 3. No longer a priority
CL-36	Enhance drainage capabilities of developed areas. Specifically, study at run-off problems from parking lots, large buildings, and other impermeable surfaces that cause flooding.	Flood	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. Add green infrastructure mitigation measures 3.
CL-37	Prepare a coordinated sandbagging plan between the County OEM and flood-prone communities in the southern half of the county.	Flood	None provided in the 2015 HMP	County OEM	No Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-38	Institute an annual survey of HAZMAT truck traffic on major routes.	Transportation Accidents	None provided in the 2015 HMP	County Planning Department	No Progress	1. 2. 3.	1. Include in the 2022 HMP 2. Transition to Highway Department and NYS DOT 3.
CL-39	Analyze traffic patterns at major intersections along State and County routes to determine ways to reduce the number of HAZMAT accidents at those intersections.	Transportation Accidents	None provided in the 2015 HMP	County Planning Department	No Progress	1. 2. 3.	1. Include in the 2022 HMP 2. Transition to Highway Department and NYS DOT 3.
CL-40	Conduct general infrastructure, signage, traffic control, and lighting upgrades to Rt. 63. These improvements should be aimed specifically at reducing the number of accidents involving HAZMAT trucks.	All	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. Transition to Highway Department and NYS DOT 3.
CL-41	Encourage each municipality to adopt and enforce building codes that will enable newly built/remodeled structures to withstand earthquakes up to	Earthquake	None provided in the 2015 HMP	County OEM	No Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.



Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success 1. Cost 2. Level of Protection 3. Damages Avoided; Evidence of Success	Next Steps 1. Project to be included in 2022 HMP or Discontinue 2. If including action in the 2022 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	magnitude 6.5 that are possible in Western New York.						
CL-42	Carry out a pre-event inspection of key buildings, bridges, and dams for seismic vulnerability. Based on this inspection, develop a seismic protection plan for these facilities.	Earthquake	None provided in the 2015 HMP	County OEM	In Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.
CL-43	Inform the public of the earthquake hazard in Livingston County through a public outreach program. This program could take the form of a website, press release, public information session, or distribution of information through local newspapers.	Earthquake	None provided in the 2015 HMP	County OEM	No Progress	1. 2. 3.	1. Include in the 2022 HMP 2. 3.



### Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The County did not identify any mitigation projects/activities that have been completed but were not identified in the previous mitigation strategy in the 2015 HMP.

### Proposed Hazard Mitigation Initiatives for the HMP Update

The County participated in a mitigation action workshop in September 2021 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

The table below indicates the range of proposed mitigation action categories.

**Table 9.1-15. Analysis of Mitigation Actions by Hazard and Category**

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Drought	X	X		X		X	X			X
Earthquake	X	X		X	X	X	X			X
Flood	X	X		X	X	X	X			X
Hazardous Materials	X	X		X	X	X	X			X
Invasive Species	X	X	X	X		X	X	X		X
Landslides	X	X		X		X	X			X
Mine Subsidence	X	X		X	X	X	X			X
Pandemic	X	X		X		X	X			X
Severe Storm	X	X	X	X	X	X	X	X	X	X
Severe Winter Storm	X	X		X	X	X	X			X
Terrorism	X	X		X	X	X	X			X
Utility Failures	X	X		X	X	X	X			X
Wildfire	X	X		X	X	X	X			X

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

Table 9.1-16 summarizes the comprehensive range of specific mitigation initiatives the County would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.



Table 9.1-16. Proposed Hazard Mitigation Initiatives

Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2022-Livingston County-001	Improve First Responder Communications	<b>Problem:</b> Communication capabilities continue to be plagued by areas of poor reception.  <b>Solution:</b> Provide better communications for First Responder units	No	No	All	1, 2	3 years	Sheriff's Office/ Emergency Management	FEMA, SICG	Better communication between 911 and responding agencies	\$1.2 million	Med.	EAP	ES
2022-Livingston County-002	Mutual Aid Agreements	<b>Problem:</b> Lack of interoperability for large-scale emergencies  <b>Solution:</b> Establish mutual aid agreements with neighboring counties for their assistance in addressing county wide disasters.	No	Yes	All	1, 2	2 years	Emergency Management, Emergency Medical Services	FEMA	More fluidity in planning for and responding to large-scale emergencies	\$5,000	Med.	LPR	ES
2022-Livingston County-003	Resident Emergency Notification	<b>Problem:</b> Not able to disseminate large amounts of information effectively to every residence.  <b>Solution:</b> Develop a standardized door tag that can be left on residents' doors when door-to-door notifications are necessary.	No	No	All	3	6 months	Emergency Management	County	Better information distribution under emergency conditions	\$5,000	Med.	EAP	ES



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2022-Livingston County-004	Backup Emergency Supplies	<b>Problem:</b> Break down of primary means of operational supplies  <b>Solution:</b> Provide special provision for backup supplies in the Emergency Management Plan.	No	No	All	1, 2	1-2 years	Emergency Management, Emergency Medical Services	FEMA, County Funding	Redundancy in supplies to ensure optimal quantities	\$100,000	High	LPR	ES
2022-Livingston County-005	Alleviate Staffing Issues	<b>Problem:</b> Volunteer staffing is dwindling over time.  <b>Solution:</b> Secure funding to alleviate staffing issues for Fire Departments and EMTs.	No	No	All	1, 2	5 years	County, Emergency Management, Emergency Medical Services	FEMA, Federal, County funding	Ensure emergency response	\$5 million	Med.	LPR	ES
2022-Livingston County-006	New Resident Education	<b>Problem:</b> New residents not acclimated to local issues  <b>Solution:</b> Set up a “Welcome Wagon” program (based on former Conesus Lake program) to distribute information about disasters for new residents.	No	No	All	3	1 year	Emergency Management	FEMA	Better Community preparation among new residents	\$10,000	Med.	EAP	PI
2022-Livingston County-007	Community Information Distribution	<b>Problem:</b> Lack of community information distribution  <b>Solution:</b> Involve community groups and local nonprofit	No	Yes	All	3	1 year	Emergency Management	County funding	Better community preparedness among all members	\$2,000	Med.	EAP	PI



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		organizations (Boy/Girl Scouts, etc.) with information distribution programs.												
2022-Livingston County-008	Education Without Panicking	<b>Problem:</b> People become indecisive during emergency. <b>Solution:</b> Develop public education programs that follow the "Education without panicking" concept.	No	No	All	3	1 year	Emergency Management, Sheriff's Office	Staff Time	Better community response to emergencies	Low	Med.	EAP	PI
2022-Livingston County-009	Resident Orientation on Shelters and Disaster Response	<b>Problem:</b> People lack geographical knowledge of sheltering <b>Solution:</b> Develop and disseminate routine public mailings/ booklets to every home. Mailings should contain maps and information on shelters and disaster response.	No	No	All	3	6 months	Emergency Management	County	Better community preparedness for sheltering events	\$5,000	Med.	EAP	ES
2022-Livingston County-010	Utility Response Improvement	<b>Problem:</b> Utility response is differentiated based on jurisdictional boundaries, creating inconsistencies. <b>Solution:</b> Develop a countywide strategy to address utility	No	Yes	Severe storm; winter storm	1, 2	5 years	Local grid companies	Local shares	Better resiliency in utilities	\$50,000	Low	LPR	ES



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		failures and protect vulnerable utilities during severe weather events.												
2022-Livingston County-011	Weather Receivers to Critical Facilities	<b>Problem:</b> Weather information does not always make it to all involved. <b>Solution:</b> Enhance the emergency notification system by providing NOAA Weather Radio Receivers to critical facilities.	Yes	Yes	Severe storm	3	2 years	Emergency Management	Grant Funding	Better preparedness	\$10,000	Low	EAP	ES
2022-Livingston County-012	Tornado Shelters	<b>Problem:</b> Structures not adequate means of tornado protection <b>Solution:</b> Encourage/support the development of tornado shelters	Yes	No	Severe Weather	1, 2	3 years	Local officials	County	Better community resiliency under tornado emergencies	\$1 million	Low	SIP	SP
2022-Livingston County-013	Sandbagging Plan	<b>Problem:</b> Flooding problems with large amounts of rain <b>Solution:</b> Prepare a coordinated sandbagging plan between the County OEM and flood-prone communities in the southern half of the county.	No	Yes	Flood	1, 2	1 year	Emergency Management	Local municipalities	Reduction in incurred storm costs	\$3,000	Low	LPR	ES
2022-Livingston County-014	Lighting Upgrades	<b>Problem:</b> Poor lighting leading to increased motor vehicle emergencies	No	No	Earthquake, Flood, Hazmat, Mine Subsidence,	1, 2	3 years	Highway	Highway	Less motor vehicle crashes	\$3 million	Low	SIP	PR



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		<b>Solution:</b> Conduct general infrastructure, signage, traffic control, and lighting upgrades to Rt. 63. These improvements should be aimed specifically at reducing the number of accidents involving HAZMAT trucks.			Severe Storm, Severe Winter Storm, Terrorism, Utility Failures, Wildfire									
2022-Livingston County-015	Earthquake Codes	<b>Problem:</b> Structures being build are not necessarily rated to proper earthquake magnitude  <b>Solution:</b> Encourage each municipality to adopt and enforce building codes that will enable newly built/remodeled structures to withstand earthquakes up to magnitude 6.5 that are possible in Western New York.	No	Yes	Earthquake	1, 2	3 years	Local code enforcement	Staff Time	Decreased damages from earthquakes	Low	Low	LPR	PR
2022-Livingston County-016	Earthquake Preparedness - Inspection	<b>Problem:</b> It is currently unknown to what degree buildings can withstand seismic disruption.  <b>Solution:</b> Carry out a pre-event inspection of key buildings.	Yes	Yes	Earthquake	1, 2	5 years	Contractor through county	County Budget	Better structural integrity and planning	\$100,000	Low	SIP	PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		bridges, and dams for seismic vulnerability. Based on this inspection, develop a seismic protection plan for these facilities.												
2022-Livingston County-017	Earthquake Preparedness – Public Awareness	<p><b>Problem:</b> Livingston County has areas that can be prone to earthquake hazards, and residents have little to no knowledge of this.</p> <p><b>Solution:</b> Inform the public of the earthquake hazard in Livingston County through a public outreach program. This program could take the form of a website, press release, public information session, or distribution of information through local newspapers.</p>	No	Yes	Earthquake	3	1 year	Emergency Management	Staff Time	Better community outreach of potential emergencies	Low	Low	EAP	PI
2022-Livingston County-018	Mitigation of vulnerable structures	<p><b>Problem:</b> Vulnerable structures, including repetitive and severe repetitive loss properties continue to be at risk in flood prone areas</p> <p><b>Solution:</b> Support the mitigation of</p>	No	No	Flooding	1, 2	5 years	Emergency Management	FEMA	Reduce flood hazard risk for vulnerable structures	\$2 million	Low	SIP	PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		vulnerable structures via retrofit (e.g., elevation, flood-proofing) or acquisition/relocation to protect them from future damage; repetitive loss and severe repetitive loss properties should be a priority, when applicable												
2022-Livingston County-019	Non-structural Flood Hazard Mitigation Alternatives for at-risk Properties within the Floodplain	<b>Problem:</b> A detailed study is needed of options for flood-vulnerable properties  <b>Solution:</b> Assess and prioritize feasible non-structural flood hazard mitigation alternatives for at-risk properties within the floodplain (including those that have been identified as repetitive loss) such as acquisition/relocation, or elevation. The parameters for feasibility for this initiative would include the following: funding, benefits versus costs, and willing participation of property owners. Implement as	No	No	Flooding	1, 2	5 years	Emergency Management	FEMA	The examination and evaluation of flood prone properties will lead to efficient mitigation of those properties	\$80,000	Med.	SIP	PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		funding becomes available.												
2022-Livingston County-020	Aquatic invasive species management analysis	<b>Problem:</b> Aquatic invasive species cause damage to ecosystems, recreational assets and water supplies.  <b>Solution:</b> Conduct n aquatic invasive species (i.e. hydrilla and Starry Stonewort) management analysis to determine effective control measures.	No	No	Invasive Species	1, 2	2 years	Planning Department	FEMA, Finger Lakes PRISM, State	Protection of ecosystems, recreational assets and water supplies	\$30,000	Med.	NSP	NR
2022-Livingston County-021	Aquatic invasive species control	<b>Problem:</b> Aquatic invasive species cause damage to ecosystems, recreational assets and water supplies.  <b>Solution:</b> Implement control measures to prevent the spread of aquatic invasive species (i.e., Starry Stonewort and hydrilla) and to eventually reduce its impact on the County's water systems.	No	No	Invasive Species	1, 2	5 years	Planning Department	FEMA, Finger Lakes PRISM, State	Protection of ecosystems, recreational assets and water supplies	\$250,000	Med.	NSP	NR



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2022-Livingston County-022	Stormwater Management Program	<p><b>Problem:</b> Erosion after storms clogs stormwater infrastructure, threatens streambank integrity leading to infrastructure endangerment, and sedimentation of the County's river, streams, and lakes</p> <p><b>Solution:</b> Develop a coordinated stormwater management program for the Conesus Lake watershed and entire county to address storm and flood impacts.</p>	No	No	Severe Storm, Flooding	1, 2	7 years	Soil & Water Conservation District, Planning Department, Emergency Management, Highway Department	WQIP, FEMA, State LWRP	Protection of infrastructure and healthy waterways	\$3 million	Med.	LPR	PR
2022-Livingston County-023	County Highway Flooding Protection	<p><b>Problem:</b> Undersized and aging culverts threaten the County's highway system when they fail, especially when they create a flooding hazard</p> <p><b>Solution:</b> Replace culverts along County roadways that could lead to flooding hazards if they remain in place</p>	No	No	Flooding	1, 2	10 years	Highway Department	State, Federal, County	Protection of County's highway system	\$900,000	Med.	SIP	PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2022-Livingston County-024	HAM Radio Operator Inventory	<p><b>Problem:</b> Communications in a disaster can break down and cut the flow of information.</p> <p><b>Solution:</b> Support each municipality in preparing a list of experienced HAM radio operators, mechanics, technicians, cooks, nurses, etc. so that in an emergency these people can take charge of rescue/recovery operations.</p>	No	No	All	1, 2	2 years	Municipalities, Emergency Management	Local, State	Maintaining communications in a disaster situation	\$2,000	Med.	LPR	ES
2022-Livingston County-025	Establish Water Redundancy	<p><b>Problem:</b> Water systems with solitary water sources are vulnerable to interruption in a hazard situation</p> <p><b>Solution:</b> Establish pipeline links to Monroe County (especially in the northern part of the county) and City of Rochester water supply systems. This would create redundancy/ connection for emergency use</p>	Yes	No	All	1, 2	7-17 years	Water & Sewer Authority, Municipal Water Systems	Federal, State	Redundancy in water sources increases the safety of the County's water systems	\$56 million	High	SIP	PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2022-Livingston County-026	Backup Power Assistance	<b>Problem:</b> Critical facilities do not have backup power in case of emergencies  <b>Solution:</b> Assist municipalities with the process of acquiring and providing backup power generators for key locations, including, but not limited, to town/village halls, police and fire stations, schools, airports/airstrips, and public buildings. This assistance can include administrative, logistical, and funding support.	Yes	No	All	1, 2	4 years	Emergency Management	FEMA, Federal, State	Continuation of public services in an emergency situation	\$50,000	Low	SIP	PP
2022-Livingston County-027	Improve Communication Equipment for Emergency Responders	<b>Problem:</b> Communication equipment does not meet the needs of emergency responders  <b>Solution:</b> Acquire new, more powerful, radios, walkie-talkies, etc.	No	No	All	1, 2	5 years	Sheriff's Office, Emergency Management	DHSES, Federal	Improved communications between and among emergency responders	\$600,000	Med.	LPR	ES
2022-Livingston County-028	Establish telephone and power line redundancy	<b>Problem:</b> Telephone lines and power lines can be damaged in storms and disaster situations	No	No	Earthquake, Flood, Hazmat, Landslide, Mine Subsidence,	1, 2	10 years	Sheriff's Office, Emergency Management	DHSES, Federal	Continue communications in an emergency situation	TBD	Med.	SIP	PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		<b>Solution:</b> Provide security provisions and redundancies for telephone lines and power lines.			Severe Storm, Severe Winter Storm, Wildfire, Terrorism, Utility Failure									
2022-Livingston County-029	Flood Mitigation	<b>Problem:</b> Flooding damages infrastructure and property.  <b>Solution:</b> Develop a flood mitigation program for flood-prone stretches of the Genesee River, Jaycox Creek, Keshequa Creek and Canaseraga Creek and the Conesus Lake shoreline area. These watercourses are the source of significant flooding and require special attention.	No	No	Flood, Severe Storm	1, 2	5-10 years	Soil & Water Conservation District, Planning Department, Emergency Management	HMGP, BRIC, FMA	Protection of infrastructure and properties	\$3 million	Med.	LPR	PP
2022-Livingston County-030	Erosion Control & Streambank Stabilization	<b>Problem:</b> Erosion and streambank failure cause damage to infrastructure and waterways.  <b>Solution:</b> Introduce erosion controls/ stream and bank stabilization measures along specific flood prone	No	No	Flood, Severe Storm	1, 2	7 years	Soil & Water Conservation District, Planning Department, Emergency Management	HMGP	Protection of infrastructure and properties	\$7 million	Med.	NSP	NR



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		watercourses, including Mud Creek, Mill Creek, Canaseraga Creek and Conesus Lake												
2022-Livingston County-031	HAZMAT Truck Traffic Annual Survey	<b>Problem:</b> The number and potential impact of HAZMAT truck traffic on major routes needs confirmation annually.  <b>Solution:</b> Institute an annual survey of HAZMAT truck traffic on major routes.	No	No	HAZMAT	1, 2	Yearly	County Highway Department, State DOT	LEPC	Increase knowledge of potential HAZMAT impact on major routes	\$3,000	Med.	LPR	ES
2022-Livingston County-032	Analyze HAZMAT intersections	<b>Problem:</b> HAZMAT accidents can cause lasting damage to life and property.  <b>Solution:</b> Analyze traffic patterns at major intersections along State and County routes to determine ways to reduce the number of HAZMAT accidents at those intersections.	No	No	HAZMAT	1, 2	3 years	County Highway Department, State DOT, Emergency Management	Federal	Reduction in HAZMAT accidents at major intersections	\$3,000	Med.	LPR	PR
2022-Livingston County-033	Protect Water and Sewer Lift Stations	<b>Problem:</b> Flooding impacts the water and sewer lift stations and pump stations along the East/West Lake Roads along Conesus Lake.	Yes	No	Flood	1, 2	Within 3 years	Engineer	HMGP, BRIC, County Budget, Staff Time	Lower expected damages to critical facilities; continued availability of potable water; public health	\$150,000	High	SIP	PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		<b>Solution:</b> Study the flood problem at the lift stations to determine a set of alternatives to protect the facilities.												
2022-Livingston County-034	Bronson Hill Road Culvert Replacement	<b>Problem:</b> The current 24” pipe is unable to handle storm flows multiple times per year, causing backup and regular ponding on adjacent properties.  <b>Solution:</b> Replace the existing 24” diameter pipe with an 8’ x 4’ concrete box.	No	No	Flood, Severe Storm	1, 2	Within 3 years	Highway	HMGP; BRIC; County Budget	Cost of repairs saved; less risk of flooding to neighboring properties	\$200,000	High	SIP	PP
2022-Livingston County-035	Poplar Hill Road Culvert Replacement	<b>Problem:</b> The current 24” pipe is unable to 20 percent , causing water to flow over the road.  <b>Solution:</b> Replace the existing 24” diameter pipe with 36” pipe capable of 50 cubic feet per second of flow	No	No	Flood, Severe Storm	1, 2	Within 3 years	Highway	HMGP; BRIC; County Budget	Cost of repairs saved; less risk of flooding to neighboring properties; reduced risk of road closure	\$10,000	High	SIP	PP

Notes:

Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV Community Assistance Visit  
 CRS Community Rating System  
 DPW Department of Public Works

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program  
 HMGP Hazard Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:





EHP	Environmental Planning and Historic Preservation	BRIC	Building Resilient Infrastructure and Communities Program	The estimated cost for implementation.
FEMA	Federal Emergency Management Agency			<u>Benefits:</u>
FPA	Floodplain Administrator			A description of the estimated benefits, either quantitative and/or qualitative.
HMA	Hazard Mitigation Assistance			
N/A	Not applicable			
NFIP	National Flood Insurance Program			
OEM	Office of Emergency Management			

Critical Facility:

Yes Critical Facility located in 1% floodplain

Mitigation Category:

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

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities



Table 9.1-17. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2022-Livingston County-001	Improve First Responder Communications	1	1	1	1	0	1	0	0	0	0	1	0	0	0	6	Medium
2022-Livingston County-002	Mutual Aid Agreements	1	1	1	1	1	1	0	0	0	0	1	0	0	1	8	Medium
2022-Livingston County-003	Resident Emergency Notification	1	1	0	0	0	0	0	0	1	0	1	1	0	0	5	Medium
2022-Livingston County-004	Backup Emergency Supplies	1	1	1	0	1	1	0	0	1	1	1	1	0	0	9	High
2022-Livingston County-005	Alleviate Staffing Issues	1	1	1	0	0	1	-1	0	1	1	1	0	0	0	6	Medium
2022-Livingston County-006	New Resident Education	1	1	0	0	0	0	0	0	1	0	1	1	0	0	5	Medium
2022-Livingston County-007	Community Information Distribution	1	1	1	0	0	0	0	0	1	0	1	1	0	0	6	Medium
2022-Livingston County-008	Education Without Panicking	1	1	1	0	0	0	0	0	0	0	1	1	0	0	5	Medium
2022-Livingston County-009	Resident Orientation on Shelters and Disaster Response	1	0	1	0	0	0	0	0	1	0	1	1	0	0	5	Medium
2022-Livingston County-010	Utility Response Improvement	1	1	0	0	0	0	0	0	0	1	1	0	0	0	4	Low
2022-Livingston County-011	Weather Receivers to Critical Facilities	1	1	0	1	0	0	0	0	0	0	1	0	0	0	4	Low
2022-Livingston County-012	Tornado Shelters	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	Low
2022-Livingston County-013	Sandbagging Plan	1	1	1	0	0	0	0	0	0	0	0	1	0	0	4	Low
2022-Livingston County-014	Lighting Upgrades	1	1	0	0	0	0	0	0	0	0	1	0	0	0	3	Low
2022-Livingston County-015	Earthquake Codes	1	1	0	1	0	1	0	0	0	0	0	0	0	0	4	Low
2022-Livingston County-016	Earthquake Preparedness - Inspection	1	1	0	1	0	0	0	0	0	1	0	0	0	0	4	Low
2022-Livingston County-017	Earthquake Preparedness – Public Awareness	1	0	1	0	0	0	0	0	0	0	0	1	0	0	3	Low
2022-Livingston County-018	Mitigation of vulnerable structures	1	1	0	1	0	0	0	1	0	0	0	0	0	0	4	Low



Table 9.1-17. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2022-Livingston County-019	Non-structural Flood Hazard Mitigation Alternatives for At-risk Properties within the Floodplain	1	1	0	1	0	0	0	1	0	1	0	0	0	0	5	Medium
2022-Livingston County-020	Aquatic invasive species management analysis	0	1	0	1	0	0	0	1	0	1	0	0	1	0	5	Medium
2022-Livingston County-021	Aquatic invasive species control	0	1	0	1	0	0	0	1	0	1	0	0	1	0	5	Medium
2022-Livingston County-022	Stormwater Management Program	1	1	0	1	0	0	0	1	0	0	1	0	1	1	7	Medium
2022-Livingston County-023	County Highway Flooding Protection	1	1	0	1	0	1	0	1	0	0	0	0	1	1	7	Medium
2022-Livingston County-024	HAM Radio Operator Inventory	1	1	1	0	0	0	0	0	0	1	1	0	0	0	5	Medium
2022-Livingston County-025	Establish Water Redundancy	1	0	0	1	1	1	0	0	1	1	1	0	1	1	9	High
2022-Livingston County-026	Backup Power Assistance	1	1	0	0	0	0	0	0	1	0	1	0	0	0	4	Low
2022-Livingston County-027	Improve Communication Equipment for Emergency Responders	1	1	0	1	0	1	0	0	1	0	1	0	1	0	7	Medium
2022-Livingston County-028	Establish telephone and power line redundancy	1	1	0	1	0	0	0	0	1	0	1	0	0	0	5	Medium
2022-Livingston County-029	Flood Mitigation	1	1	0	1	0	0	0	1	1	0	1	0	1	1	8	Medium
2022-Livingston County-030	Erosion Control & Streambank Stabilization	1	1	0	1	0	0	0	1	0	0	1	0	1	1	7	Medium
2022-Livingston County-031	HAZMAT Truck Traffic Annual Survey	1	1	1	1	0	0	0	1	0	1	0	1	0	0	7	Medium
2022-Livingston County-032	Analyze HAZMAT intersections	1	1	1	1	0	0	0	1	0	1	0	0	0	0	6	Medium
2022-Livingston County-033	Protect Water and Sewer Lift Stations	1	1	1	1	1	1	0	1	1	0	0	1	1	1	11	High
2022-Livingston County-034	Bronson Hill Road Culvert Replacement	0	1	1	1	1	1	1	0	0	0	1	1	1	1	10	High
2022-Livingston County-035	Poplar Hill Road Culvert Replacement	0	1	1	1	1	1	1	0	0	0	1	1	1	1	10	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).





### 9.1.9 Action Worksheets

The following action worksheets have been developed by the County to aid in the submittal of grant applications to support the funding of high priority proposed actions.

Action Worksheet			
<b>Project Name:</b>	Bronson Hill Road Culvert Replacement		
<b>Project Number:</b>	2022-Livingston County-034		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	The current 24” pipe is unable to handle storm flows multiple times per year, causing backup and regular ponding on adjacent properties.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	Replace the existing 24” diameter pipe with an 8’ x 4’ concrete box.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the Special Flood Hazard Area?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	100-year storm event	<b>Estimated Benefits (losses avoided):</b>	Cost of repairs saved; less risk of flooding to neighboring properties
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$200,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 3 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP; BRIC; County Budget
<b>Responsible Organization:</b>	Highway	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital Improvement
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Elevate Roadway	\$500,000	Not cost effective
	Replace culvert with concrete box	\$200,000	Selected alternative
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Evaluation and Prioritization		
<b>Project Name:</b>	Bronson Hill Road Culvert Replacement	
<b>Project Number:</b>	2022-Livingston County-034	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	0	
Social	0	
Administrative	0	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Poplar Hill Road Culvert Replacement		
<b>Project Number:</b>	2022-Livingston County-035		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	The current 24" pipe is unable to 20 percent , causing water to flow over the road.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Replace the existing 24" diameter pipe with 36" pipe capable of 50 cubic feet per second of flow		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Is this project related to a Critical Facility located within the Special Flood Hazard Area?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
<b>Level of Protection:</b>	500-year storm (pipe can handle 50 cfs of flow; 500-year storm is only 47.1 cfs)	<b>Estimated Benefits (losses avoided):</b>	Cost of repairs saved; less risk of flooding to neighboring properties; reduced risk of road closure
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$10,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 3 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP; BRIC; County Budget
<b>Responsible Organization:</b>	Highway	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital Improvement
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Elevate Roadway	\$500,000	Not cost effective
	Replace culvert	\$10,000	Selected alternative
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Evaluation and Prioritization		
<b>Project Name:</b>	Poplar Hill Road Culvert Replacement	
<b>Project Number:</b>	2022-Livingston County-035	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	0	
Social	0	
Administrative	0	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	