



9.1 CAYUGA COUNTY

This section presents the jurisdictional annex for Cayuga 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 county and who in the county participated in the planning process; an assessment of the county’s risk and vulnerability; the different capabilities utilized in Cayuga 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.

Table 9.1-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Harry Sherman, Deputy Director of Emergency Services Address: 160 Genesee Street Phone Number: 315-255-1163 Email: hsherman@cayugacounty.us	Name/Title: Dale Currier, Interim Director of Emergency Services Address: 160 Genesee Street Phone Number: 315-255-1162 Email: dcurrier@cayugacounty.us

9.1.2 Municipal Profile

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

9.1.3 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. The jurisdictional annexes for each municipality summarize recent and expected future development trends, including major residential/commercial development and major infrastructure development. The Cayuga County Economic Development Agency (“CEDA”), a separate local development corporation funded primarily by Cayuga County, plays a vital role in implementing a comprehensive economic development strategy for all of Cayuga County. CEDA’s most recent strategic plan for the county includes the following:

- **Agriculture:** Conversion of bulk milk into value-added products; expansion of small farms producing organic products, specialty cheeses and other niche products; expansion of vineyards and wineries.
- **Manufacturing:** Support retention/expansion of existing manufacturers; develop the resources necessary to attract other manufacturing jobs in food/milk processing, plastics, metal parts and components, machinery, energy and transportation equipment, and other segments.
- **Tourism:** Continue development of the Musical Theatre Festival; create “experiential” vacation packages with culinary/wine and “hands on” farm experiences; expand activities and events to spring and fall shoulder seasons.
- **Educational Institutions:** Wells College, Cayuga Community College and BOCES are all engaged in various expansions of facilities, programs and curriculums. Close ties between business and campus is a major asset for Cayuga County.
- **Entrepreneurship:** Expand local economy through new business creation and acceleration of existing small businesses.





As the region has seen a declining and aging population, the county looks to develop in a way that could attract people from urban areas, at the same time maintaining the county’s rural characteristics.

9.1.4 Capability Assessment

An inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies was developed for the county. Section 6 (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 for the impacts of climate change.
- Information on National Flood Insurance Program (NFIP) compliance.

Areas where mitigation is currently integrated are summarized in this Capability Assessment. Cayuga County identified specific integration activities that will be incorporated into procedures are included in the updated mitigation strategy. Refer to Appendix I for the results of the planning/policy document review and the answers to integration survey questions.

Planning, Legal, and Regulatory Capability

The table below summarizes the regulatory tools that are available to the county and where hazard mitigation has been integrated.

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

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated into your mitigation plan?	
						If no - can it be a mitigation action?	
Codes, Ordinances, & Requirements							
Building Code	No	The Uniform Code (19 NYCRR Parts 1219 to 1229)	Performed at the local level	-	Yes	N/A	-
Comments: <i>NYS Uniform and Energy Code 2020; Regulated at local and state levels.</i>							
Zoning Code	No	-	Performed at the local level	-	No	N/A	-
Comment:							
Subdivision Regulations	No	-	Performed at the local level	-	No	N/A	-
Comment:							
Stormwater Management Regulations	No	-	Performed at local level	-	Yes	N/A	No





	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated into your mitigation plan? If no - can it be a mitigation action?	
Comment:							
Post-Disaster Recovery	Yes	Comprehensive Emergency Management Plan, 2019	-	-	No	No	No
Comment:							
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	No	No
Comment: 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.							
Growth Management Regulation	No	-	-	-	No	-	-
Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.							
Site Plan Review	No	-	Performed at local level	-	No	-	-
Comment: Performed at the local level.							
Environmental Protection	Yes	-	-	-	Yes	-	-
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019							
Flood Damage Prevention Law	No	-	Performed at the local level	-	Yes	-	-
Comment: This is performed at the local level							
Municipal Separate Storm Sewer System (MS4) Regulation	No	-	Cayuga County is not designated MS4	-	Yes	No	No
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.							
Emergency Management	Yes	Comp Emergency Management Plan 2019	-	-	Yes	No	No
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.							
Climate Adaptation	Yes	Various Plans	county	Planning	No	No	No
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.							
Disaster Recovery Ordinance	Yes	Emergency Management Plan	county	Emergency Management	No	No	No
Comment:							
Disaster Reconstruction Ordinance	No	-	-	-	No	No	No
Comment:							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated into your mitigation plan?	
						If no - can it be a mitigation action?	
Other Applicable Codes, Ordinances, & Requirements	No	-	-	-	-	-	-
Comment:							
Planning Documents							
Comprehensive Plan	No	-	-	-	No	No	2021-Cayuga County-015
Comment:							
Capital Improvement Plan	No	-	-	-	No	No	No
Comment:							
Disaster Debris Management Plan	No	-	-	-	No	No	No
Comment:							
Floodplain or Watershed Plan	Yes	Cayuga and Owasco Skaneateles Lake Watershed Plan Member	Owasco and Cayuga Watershed Plan	county Planning	No	Yes	No
Comment: The county participates in the Cayuga, Owasco, and Skaneateles Lake Watershed Plans which address climate resilience and land use management related issues within the watersheds.							
Stormwater Management Plan	No	Local Plan	-	-	No	No	No
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects. Janine Wilson from Water and Sewer Authority conducted county support on county report development on county water and sewer infrastructure.							
Open Space Plan	Yes	NYS Constitution - Article 9; Statute of Local Governments. Section 10 (7) – Open Space and Agricultural Protection Plan, updated 2013	county	Planning	Yes	No	No
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.							
Urban Water Management Plan	No	-	-	-	No	No	No
Comment:							
Habitat Conservation Plan	No	-	-	-	No	No	No
Comment: Laws related to habitat protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.							
Economic Development Plan	Yes	Cayuga-Economic Development Agency	-	Cayuga Economic Development Agency (CEDA)	No	No	No
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan.**May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated into your mitigation plan?	
						If no - can it be a mitigation action?	
Shoreline Management Plan	No	Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations	-	-	Yes for coastal areas	No	No
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas; 6 NYCRR Part 505, Coastal Erosion Management Regulations							
Community Wildfire Protection Plan	Yes	EMO Continuity of Service and Operation Manual, March, 2019	county	-	No	No	No
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020. Provides general information on mutual aid agreement information and procedures during an emergency and continuity of operation.							
Forest Management Plan	No	-	-	-	No	No	No
Comment:							
Transportation Plan	No	-	-	-	No	No	No
Comment:							
Agriculture Plan	Yes	2013	-	-	Yes	No	No
Comment: Municipalities may develop agricultural and farmland protection plans, often with assistance by Cayuga County Planning Department and/or Cooperative Cooperative Extension and other organizations, including local farmers.							
Other (tourism, business dev, etc.)	No	-	-	-	-	-	-
Comment:							
Response/Recovery Planning							
Comprehensive Emergency Management Plan	Yes	Emergency Management Plan	county	Emergency Management	Yes	No	No
Comment: The county updated the CEMP in 2019							
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-	Yes	No	No
Comment: HIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.							
Post-Disaster Recovery Plan	No	-	-	-	No	No	No
Comment:							
Continuity of Operations Plan	Yes	2018-2019	County	Various Departments	No	No	No
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations."							
Public Health Plan	Yes	Updated in 2018. Cayuga	county	Health Department	No	No	No





	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated into your mitigation plan?	
						If no - can it be a mitigation action?	
		County Public Health Emergency Preparedness and Response Plan					
Comment:							
Other	Yes	-	-	-	No	No	No
Comment:							
<ul style="list-style-type: none"> Cayuga County Emergency Preparedness Assessment (CEPA) – in 2017, the county participated in the NYSDHSES CEPA to assess changes capabilities related to previously identified hazards as well as identify new hazards and potential impact. The CEPA reviewed 24 hazards and ranked them according to likelihood and impact on the county. The highest ranked hazards in the CEPA were: flooding, cyber-attack, hazmat release, major fires (not wildfire), severe wind/tornado, critical infrastructure failure, pandemic, and severe winter snowstorms. 							

Table 9.1-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Does your jurisdiction issue development permits? If no, who does? If yes, which department?	No
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Not available

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the county.

Table 9.1-4. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board (Department of Planning & ED)	Yes	Planning
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Cayuga Economic Development Agency (CEDA) was established to implement a comprehensive economic development strategy for all of Cayuga County.
Warning Systems / Services (Mass Notification System, outdoor warning signals)	Yes	There are several systems in place to help the county issues warnings and alerts to residents. This includes the Emergency Alert System, NOAA NWS Radios, stationary warning sirens, NY-Alert, door-to-door public warning, and emergency service vehicles with sirens and public address capabilities.
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	Fire Services/ Various Municipal DPWs with NYS DOT/ CNY Public Health Alliance





Resources	Available? (Yes or No)	Department/ Agency/Position
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	Yes	Planning
Staff with expertise or training in benefit/cost analysis	Yes	Emergency Management
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Planning – GIS Analyst
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	No	This is performed at the municipal level
Surveyor(s)	Yes	Highway
Emergency Manager	Yes	Emergency Management
Grant writer(s)	Yes	Various Departments
Resilience Officer	No	NA
Other		-

Fiscal Capability

The table below summarizes financial resources available to the county.

Table 9.1-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
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	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
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other	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

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Do you have a public information officer or communications office?	Yes – Public Information Officer as noted in the Cayuga County CEMP
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <ul style="list-style-type: none"> If yes, briefly describe. 	Yes – the County’s Emergency Management Office website contains a page dedicated to the HMP. The County also provides information on preparing a





Indicate if your jurisdiction has the following resources	Yes/No; Please describe
	family emergency plan and emergency supply kit. They also provide emergency alerts on their main page.
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	Yes – different county departments utilize Facebook as a form of public outreach and education
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe.	Yes – Local Emergency Planning Committee
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe.	Yes – have app to transmit hazard related information.

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)	Not applicable	NP	NP
Building Code Effectiveness Grading Schedule (BCEGS)	Not applicable	NP	NP
Public Protection (ISO Fire Protection Classes 1 to 10)	Not applicable	All municipalities have ISO rating	NP
NYSDEC Climate Smart Community	Yes	Registered	NA
Storm Ready Certification	Yes	Certified	NA
Firewise Communities classification	No	NA	NA

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 2016). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.1-8. Adaptive Capacity of Climate Change

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Disease Outbreak	High
Drought	Medium
Flood	Medium
HABs	Medium
Severe Storm	Medium
Severe Winter Storm	High
Transportation	Medium

*High Capacity exists and is in use
 Medium Capacity may exist; but is not used or could use some improvement





Low Capacity does not exist or could use substantial improvement
Unsure Not enough information is known to assign a rating

National Flood Insurance Program

Management and regulation of the regulatory floodplains are done at the local level. Refer to the individual jurisdictional annexes for details on the NFIP for each municipality.

Additional Areas of Existing Integration

- **Cayuga County Local Emergency Planning Committee (LEPC)** – the LEPC was established in November 2010. The LEPC identifies hazardous material locations which can pose a danger or cause concern to the public. They also identify major concerns or problems that may arise at those locations and determine response if necessary.
- **Cayuga County Public Works Committee** is responsible for land use planning and management of county-owned land. The Cayuga County Department of Planning and Economic Development advises the Public Works Committee concerning land use and planning matters.
- **Cayuga County Department of Planning and Economic Development** also reviews land use planning and management actions by municipal governments and private interests, develops land use policies and programs, as well as reviews land use actions throughout Cayuga County, including:
 - Authorize county land use management programs.
 - Advise and assist local governments in the county in developing and adopting comprehensive master plans for community development, zoning ordinances, subdivision regulations, and building codes.
 - Assist and advise the town and village planning and zoning boards in the review process of local zoning and subdivision actions.
 - Participate in State Environmental Quality Review Act (SEQRA) review of proposed projects in the county.
- **Alert and Warning Systems in Cayuga County**
 - Emergency Alert System (EAS)
 - Communication Through TV and Radio
 - NOAA Weather Radio – provides continuous radio broadcasts with the latest weather information and has the ability to broadcast non-weather related emergency warnings.
 - Stationary Sirens – the county has two types of sirens (fire sirens and special hazard siren) that can be activated.
 - Emergency Service Vehicles with Siren and Public Address Capabilities – the county has vehicles equipped with sirens to provide neighborhood sweeps.
 - Door-to-door public warning may be conducted by designated groups (such as police officers and/or firefighters) visiting each facility/residence in the affected area and relating the emergency information to the building occupants. To achieve maximum effectiveness, the individual delivering the warning message should be in official uniform and/or carry a government-issued identification card whenever possible.
 - Website and Social Media – the county maintains a webpage with information about disaster preparedness and links to sign up for and receive notifications from the NWS and NY-Alert. The county Sheriff's Office and the City of Auburn Police Department also maintain Facebook and Twitter accounts for dissemination of information.



- Mass Notification Systems – the county uses NY-Alert to issue mass notification messages across different formats (SMS, cell bursting, email, landslide phones, fax). Cayuga County E 9-1-1 maintains a call out system that has the capability to place calls to phones in a user-specific geographical areas in the county.
- The county discourages construction within 100-year floodplain.
- The county continues to support retrofitting or relocation of structures located within hazard-prone areas to protect from future damages.
- The county maintains compliance and good standing with the NFIP.
- The county works to maintain high regulatory standards.
- The county maintains mutual aid agreements with neighboring communities.
- The county support implementation of best farming and agriculture practices to minimize erosion and other environmental impacts from agriculture land use via the Cayuga County Soil & Water Conservation District (CCSWCD).
- The county supports all ongoing efforts around hazard mitigation and engages with municipalities to facilitate process.

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

As stated in the 2019 Cayuga County CEMP, evacuation is, by nature, a localized operation and will normally be conducted at the local government level. The need to evacuate may initiate at the city, village, town, or county level. The decision to evacuate will be made by the local Chief Executive. When local evacuation must be undertaken immediately due to an existing or threatened public situation, direction and control is the responsibility of the incident commander, which may be filled by one of the following positions: Emergency Management Office (EMO) Director, County Sheriff, or other authorized local public safety official.

EMO, in coordination with the appropriate departments and agencies (e.g., County Health Department), will evaluate the hazard and its effect. This information will be considered in the decision-making process for evacuation and to determine the following:

- Appropriate population(s) to notify
- Evacuation routes and times
- Direction and distance to move (unless immediate evacuation is directed by Police Department)
- Congregate care centers or reception centers
- Resources needed and available for utilization

Evacuation routes will be determined on an as-needed basis by the appropriate public safety partners knowledgeable of the local roadways and waterways, possible construction barriers, weather conditions, along with other local and regional conditions and incidents, which may impede a safe, efficient, and timely evacuation along a specified route. These evacuation routes will be communicated to the public through a variety of formats and modalities to promote an orderly and even traffic flow.



Refer to Section 4 (County Profile) for an overview of evacuation routes.

Sheltering

In New York State, the American Red Cross is the primary organization responsible for temporary sheltering and has specific criteria for designated shelters within the state and Cayuga County. In the county, the American Red Cross has an ongoing list of facilities available to use as shelters for residents. Refer to Section 4, County Profile for an overview of sheltering in the county.

Temporary Housing

The County has not identified sites for the placement of temporary housing for residents displaced by a disaster or potential sites suitable for relocating structures out of the floodplain and/or building new homes once properties in the floodplain are acquired. The county will work with municipalities to locate suitable temporary housing sites as noted in Table 9.1-13, Action #2021-Cayuga County-016.

Table 9.1-9. Temporary Housing Locations in the county

Site Name	Site Address	Infrastructure / Utilities Available (water, electric, septic, etc.)	Capacity (number of sites)	Type	Actions Required to Ensure Conformance with the NYS Uniform Fire Prevention and Building Code
Due to logistical limitations, the county does not have any designated locations in place.					

Permanent Housing

The county has identified potential appropriate locations throughout the planning area as indicated in Section 4, County Profile. The county will work with municipalities during the plan performance period to establish memoranda of understanding with property owners, as appropriate, to further identify suitable permanent housing sites.

9.1.5 Hazard Event History Specific to the county

Cayuga County has a history of 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 Cayuga County. For details of hazard events that impacted the county, refer to Volume I, Section 5.0 of this plan.

9.1.6 Hazard Ranking and Jurisdiction-Specific 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 county’s risk ranking methodology is included in Section 5.3 (Hazard Ranking) of this plan. The results and data used to determine the hazard ranking are included in Section 5.4 (Hazard Profiles).

Critical Facilities

New York Department of Environmental Conservation (DEC) Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for State projects located in flood hazard areas. The law states that no such projects related to critical facilities shall be undertaken in a Special Flood Hazard Area (SFHA) unless constructed according to specific mitigation specifications, including being raised 2’ above the Base Flood Elevation (BFE). This statute



is outlined at <http://tinyurl.com/6-CRR-NY-502-4>. While all vulnerabilities should be assessed and documented, the State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 0.2 percent chance flood event, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYS DHSES 2017).

The table below identifies critical facilities (with an indication of which of the critical facilities are identified as lifelines) located within the community and within the 1-percent and 0.2-percent floodplain. In addition, the table indicates the Hazus-MH (Hazards United States– Multi-Hazards) estimates of the damage and loss of use to these facilities as a result of a 1-percent annual chance flood event.

Table 9.1-10. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
No facilities have been identified.				

Source: 2020 county GIS data.

*Identified community lifeline

Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating jurisdiction may have differing degrees of risk exposure and vulnerability compared to Cayuga County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard rankings of potential hazards for Cayuga County.

During the review of the hazard/vulnerability risk ranking, the county indicated the following:

- Droughts have been increasing over the past years.
- Though the county has increased its overall capacity with recent events around COVID-19, overall this capacity is limited and the county would like to continue to expand its preparedness around disease outbreak response.
- HABs are a significant issue in the county, especially regarding drinking water sourced from Owasco and Cayuga Lakes.
- While winter storms are frequent in the county, all municipalities and the county has a high capacity for response.
- Disease outbreak can be difficult to determine as it usually affects large areas. In this study, the hazard will just be marked as medium.



- Transportation hazards are a significant concern for many community members with the various rail lines and major state and interstate highway networks that pass through the county and cause concern to local community members.

Table 9.1-11. Hazard Ranking Input

Disease Outbreak	Drought	Flood	HABs	Severe Storm	Winter Storm	Transportation
Medium	High	High	High	High	Medium	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

Identified Issues

The county has identified the following vulnerabilities within their community:

- Limited cell and internet service.
- Challenging geography of the county.
- High cost of required HazMat equipment.
- Staffing turnover, including retirements.
- Financial constraints from the federal, state, and local levels.

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

- City of Auburn - several areas are prone to localized local flooding and seem vulnerable to more severe events such as 100 year floods or hurricane fueled rain events.
- Owasco Lake water quality is poor.
- Areas of Cayuga County are downstream of rivers from other areas outside the control of Cayuga County.
- Climate Change - Owasco Lake has already experienced high levels of harmful algal blooms due to increasingly warm summers. We need to do everything possible to protect our only source of water for the community
- Moravia NY is high flood zone, particularly Main St (North and South) and Congress St. The storm drain on Congress/Park Street always overflows and creates flooding.
- Drains are always clogged so street flooding is a guarantee
- In Owasco, rain events cause flooding conditions; there is a need to maintain water levels in Owasco Lake below flood stage level.

9.1.7 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 2014 Plan. 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 9.1-12. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
CC-1	-	Flooding	County with City support	Conduct a flood study of the 3-4 blocks around the Cayuga County Office Building and implement green infrastructure and other changes to mitigate and prevent flooding of the basement of the county Office Building which contains the county's Emergency Operations Center.	Complete	Low	Medium	Complete
CC-2	-	Flooding	County with support from municipalities and NYSDEC	Develop a comprehensive beaver management plan along flood prone streams and marshes in Cayuga County.	No Progress	-	-	Ongoing; unclear on solution.
CC-3	-	Flooding	County, municipality	Develop a debris control plan for all protected and unprotected streams in Cayuga County and work with county agencies, towns, villages and landowners to implement.	No Progress	-	-	Ongoing, include in next plan (action 006)
CC-4	-	Flooding	County, with municipality support	Explore county road stabilization in shale and muck areas. Roads include Appletree Point, Glen Haven Road, Filmore Gulf Road, Slayton Road, Sunken Bridge Road and others.-	Discontinued	-	-	Discontinued no longer relevant
CC-5	-	All	NYS	O'Neil Road, Howland Island and CSX High Bridge bridges are no longer in use and are no longer maintained by NYSDOT or CSX. Work with NYSDOT or CSX to remove or begin maintenance of these bridges to prevent failure.	No Progress	-	-	Discontinued; no longer relevant
CC-6	-	Flooding	County with municipal support	North Division Street Bridge in Aurelius catches debris. Explore and install mitigation measures.	Complete	Medium	High	Complete 2019



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Evidence of Success		
CC-7	-	Flooding	County with municipal support	Explore flooding of Aurora Street and Long Hill Road in Moravia and mitigation measures.	Complete	Cost	Medium	Next step TBD; this action is discontinued
						Level of Protection	Medium	
						Damages Avoided; Evidence of Success	Medium	
CC-8	-	Flooding	County	Rockefeller Road Protection and Mitigation Project. Improve resiliency of county and Town Roads in the vicinity of steep slopes of the Owasco Lake Valley particularly Rockefeller and Oak Hill Roads.	No reported progress	Cost	-	Discontinued; county unaware of this being an issue.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-9	-	All	County	Conduct engineering to determine how to utilize the county digester as an emergency power source to Cayuga County buildings at the county House Road Complex	Complete for now	Cost	Medium	Complete - The Digester currently provides behind-the-meter electricity to the County House Road Complex buildings via a microgrid.
						Level of Protection	Medium	
						Damages Avoided; Evidence of Success	Electricity backup power	
CC-10	-	Flooding	County with municipal support	Detailed flood analysis and installation of green infrastructure in flood prone areas.	In progress	Cost	-	Ongoing; discontinued
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-11	-	All	County with municipal support	Create a list of emergency equipment available in Cayuga County.	Complete	Cost	Low	Complete
						Level of Protection	Medium	
						Damages Avoided; Evidence of Success	Medium	
CC-12	-	All	Railroad, county with municipal support	Explore ways to make the railroad crossing at North Division Street in the City of Auburn safer.	Complete	Cost	Medium	Complete
						Level of Protection	High	
						Damages Avoided;	High	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Evidence of Success	Cost	
CC-13	-	Landslide Flood	USACOE, County	Re-evaluate the rule curve of Owasco Lake.	Unsure; no progress	Evidence of Success	-	No progress, discontinued
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-14	-	All	County	Identify places to store wood debris after an incident.	No Progress	Cost	-	Discontinued
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-15	-	All	County	Develop a plan to get fuel where it is needed after an incident.	No Progress	Cost	-	Discontinued
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-16	-	Flood	City of Auburn, County	Work with the City of Auburn to maintain and flood proof their water pump Station	Ongoing	Cost	-	This action is an ongoing capability that the county is working with the City of Auburn on. This action will be discontinued.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-17	-	All	County with municipal support	Develop a tree trimming law to prevent improper trimming of trees which leads to road closures and phone/cable line damage and failures.	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
CC-18	-	All Hazards	EMO, NYSOEM, FEMA	<p>Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide and maintain links to the HMP website, and regularly post notices on Cayuga County homepage(s) referencing the HMP webpages. <input type="checkbox"/> Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. <input type="checkbox"/> Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. <ul style="list-style-type: none"> • Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding. 	Ongoing	Cost	-	Discontinued; ongoing program: With retirement of County Environmental Engineer from Planning Department, who was designated as the County Flood Hazard Mitigation Engineer, is vacant. These responsibilities, and the designation of Flood Hazard Mitigation Coordinator, needs to be reallocated to one or more individuals outside of the Planning Department – perhaps to staff from the Cayuga County Highway Department who are in the field consistently throughout the county or as a delegated task/responsibility under the Cayuga County Soil and Water Conservation District.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-19	-	All Hazards	County		Ongoing	Cost	-	Ongoing; Discontinued



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				Support Incorporation of ordinances and/or zoning restrictions to control and mitigate future development in hazard areas, specifically as identified in county multi-hazard identification map provided in Section I of this annex.		Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-20	-	All Hazards	County	Continue to improve communication systems.	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-21	-	All Hazards	County with support from, NYSOEM and FEMA	Develop programs/procedures to capture and archive loss data from events. Examples include: <ul style="list-style-type: none"> Record location and length of roadway closures; Develop a database of residential and commercial property damage, including permit history for such repairs; High water marks, perhaps painting phone poles with high water marks and or regulatory Base Flood Elevations (BFEs). 	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-22	-	All Hazards	County	Obtain and install backup power sources at critical facilities especially for the Emerson Park Pavilion for use as shelter.	Complete	Cost	Medium	Complete
						Level of Protection	High	
						Damages Avoided; Evidence of Success	High	
CC-23	-	All Hazards			Ongoing	Cost	-	Discontinued; ongoing



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
			Hazard Mitigation Plan Coordinator in Cayuga County EMO	<p>Participate in local, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including:</p> <ul style="list-style-type: none"> Support the performance of enhanced risk and vulnerability assessments for hazards of concern. Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. <p>Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types based on FEMA-154 "Rapid Visual Screening of Buildings for Potential Seismic Hazards" methodologies). It is recognized that these programs will need to be initiated and supported at Cayuga County and/or State level, and will require training, tools and funding provided at the county, state and/or federal level.</p>		Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-24	-	All Hazards	County Emergency Management	Support ongoing updates of Comprehensive Emergency Management Plans	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	





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						Cost	-	
CC-25	-	All Hazards	County	Support creation and enhancement of Mutual Aid agreements with neighboring communities for continuity of operations	Ongoing	Level of Protection	-	Discontinued; ongoing
						Damages Avoided; Evidence of Success	-	
						Cost	-	
CC-26	-	All Hazards	County	Identify and develop agreements with entities that can provide support with FEMA/NYSOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/SOEM paperwork compilation, submissions, record-keeping	Ongoing	Level of Protection	-	Discontinued; ongoing
						Damages Avoided; Evidence of Success	-	
						Cost	-	
CC-27	-	All Hazards	County, FEMA	Work with regional agencies (i.e. county and NYSOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	Ongoing	Level of Protection	-	Discontinued; ongoing
						Damages Avoided; Evidence of Success	-	
						Cost	-	
CC-28	-	All Hazards	County Emergency Management	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	Ongoing	Level of Protection	-	Discontinued; ongoing
						Damages Avoided; Evidence of Success	-	
						Cost	-	



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CC-29	-	Flood, Severe Storm	Emergency Management with support from NYSOEM, FEMA	<p>Purchase, relocate, or elevate county-owned structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as priority.</p> <p>Phase 1: Identify appropriate candidates based on cost-effectiveness.</p> <p>Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability</p>	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-30	-	Flood	Emergency Management	Inventory and evaluate private bridges throughout Cayuga County.	Incomplete	Cost	-	Include in next plan
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-31	-	Flood	Emergency Management with support from NYSDOT, Town of Mentz	Continue to monitor and upgrade bridges as needed to mitigate ice jams, flooding, and other ice damage (e.g. Hayden Road and NY Central Railroad Bridges).	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-32	-	Flood	County, NYSOEM and FEMA	Promote the participation of Floodplain Administrators within the planning process and other activities.	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	



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						Cost		
CC-33	-	Severe Storm	County, NYSOEM and FEMA	Maintain county's involvement with the Storm Ready Program.	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-34	-	Severe Storm	County Planning	Support adoption of regulations for undergrounding utilities in new developments outside of flood hazard areas.	Ongoing	Cost	-	Discontinued; ongoing. County Planning can incorporate support for this initiative into ongoing local Planning and Zoning Board trainings and when County Planning is directly involved in updating local zoning or land use policies with municipalities via planning services contracts
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-35	-	Severe Storm	County Planning	Support Implementation of permit fee waivers for installation of backup power for private property.	Ongoing	Cost	--	Discontinued; ongoing. County Planning can incorporate support for this initiative into ongoing local Planning and Zoning Board trainings and when County Planning is directly involved in updating local zoning or land use policies with municipalities via planning services contracts.
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-36	-	Severe Storm		Provide public education and outreach on proper installation and/or use of backup power	Ongoing	Cost	-	Discontinued; ongoing
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-37	-	Ground Failure	County	Upgrade facilities impacted by sinkhole contamination (e.g. generator, treatment).	Unsure; discontinued	Cost	-	Discontinued
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-38	-	Ground Failure	County	Inventory shale in Cayuga County and upgrade roads and facilities that could be impacted by ground failure	Incomplete	Cost	-	Discontinued; no clear solution
						Level of Protection	-	
						Damages Avoided;	-	



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						Evidence of Success	Cost	
CC-39	-	Ground Failure	County	Inventory muck in Cayuga County and upgrade roads and facilities that could be impacted by ground failure	Unsure	Evidence of Success	-	Discontinued; not relevant
						Cost	-	
						Level of Protection	-	
CC-40	-	Transportation	County, Railroads	Catalog and prioritize at grade rail crossing for improvement.	Incomplete	Damages Avoided; Evidence of Success	-	Include in new plan (action 013)
						Cost	-	
						Level of Protection	-	
CC-41	-	Transportation	County, Railroads	Work with railroads to upgrade and maintain Cayuga Lake and Seneca River crossings.	Ongoing	Damages Avoided; Evidence of Success	-	Include in new plan (action 013)
						Cost	-	
						Level of Protection	-	
CC-42	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization along the Cayuga Lake lakeshore and nearby tributaries as needed. Recreation areas, steep slopes and certain beaches on part of the lake may require stabilization.	Ongoing	Damages Avoided; Evidence of Success	-	Include in new plan (action 007)
						Cost	-	
						Level of Protection	-	
CC-43	-	Flood	Cayuga SWCD; NYSDEC; USACE;		Unsure	Damages Avoided; Evidence of Success	-	Include in new plan (action 007)
						Cost	-	



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				The Cayuga SWCD proposes to complete bank stabilization as needed along the Cold Springs Brook watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Enhancement of the floodplain will also lead to a reduction of damage during a major storm event. Portions of the stream are also prone to ice jams. These cause flooding and an increase in erosion due to bed and bank scour, as well as having the potential for causing significant property damage as well as threatening a 60 bed adult care facility, the Village of Weedsport's wastewater treatment plant and the CSX/Amtrak railroad culvert, berm and track. Significant losses to valuable agricultural land, forestland and property would be mitigated.		Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-44	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization as needed along the Crane Brook watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Enhancement of the floodplain will also lead to a reduction of damage during a major storm event. Significant losses to valuable agricultural land, forestland and property would be mitigated.	Ongoing	Cost	-	
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-45	-	Flood	Cayuga SWCD; NYSDEC; USACE;		Ongoing	Cost	-	Include in new plan (action 007)



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				The Cayuga SWCD proposes to complete bank stabilization and clearing/snagging of debris jams from the channel of the Dutch Hollow Brook watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Areas where improvements can be made to enhance the stream's ability to reach its floodplain will also be investigated and potential projects proposed. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Owasco Lake as a result of the reduction of nutrient rich soil particles entering the Lake. Additional projects listed in the Dutch Hollow Brook Streambank Management Plan.		Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-46	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization along a few reaches of the Fall Creek watercourse, and to enhance the floodplain. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Significant losses to valuable agricultural land, forestland and property would be mitigated.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-47	-	Flood	Cayuga SWCD; NYSDEC; USACE;		Ongoing	Cost	-	Include in new plan (action 007)



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				The Cayuga SWCD proposes to complete bank stabilization along a few reaches of the Great Gully Creek water-course. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Cayuga Lake as a result of the reduction of nutrient rich soil particles entering the Lake.		Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-48	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga County SWCD proposes to put bank stabilization and erosion control measures in place at Moon Beach, on the southeastern shore of Lake Ontario, to combat shoreline erosion issues.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-49	-	Flood	Cayuga SWCD; NYSDEC; USACE;		Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	



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				The Cayuga SWCD proposes to complete bank stabilization, gravel bar removal and/or reshaping and clearing/ snagging of debris jams from the channel of the Owasco Inlet watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Areas where improvements can be made to enhance the stream's ability to reach its floodplain will also be investigated and potential projects proposed. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Owasco Lake as a result of the reduction of nutrient rich soil particles entering the Lake.		Damages Avoided; Evidence of Success	-	
CC-50	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization along the Owasco Lake lakeshore and throughout the immediate unnamed smaller tributaries that flow into the lake, as needed. The reduction of soil loss would also be beneficial for the water quality of Owasco Lake as a result of the reduction of nutrient rich soil particles entering the Lake.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-51	-	Flood	Cayuga SWCD; NYSDEC; USACE;		Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	



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				The Cayuga SWCD proposes to complete bank stabilization and clearing/snagging of debris jams from the channel of the Owasco Outlet watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Areas where improvements can be made to enhance the stream's ability to reach its floodplain will also be investigated and potential projects proposed. Significant losses to valuable agricultural land, forestland and property would be mitigated. Portions of the outlet are also prone to ice jams. These cause flooding and an increase in erosion due to bed and bank scour.		Damages Avoided; Evidence of Success	-	
CC-52	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization along a few reaches of the Paines Creek watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Cayuga Lake as a result of the reduction of nutrient rich soil particles entering the Lake. Turbidity has been an issue in for some of the village water treatment systems that draw public water from the lake, so a reduction of sediments would benefit those systems as well.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-53	-	Flood			Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
			Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization as needed along the Putnam Brook and North Brook watercourses. Protecting the banks from erosion and removing excess gravel and debris from the watercourses will allow the main flow of the water to remain in the channel. Enhancement of the floodplain will also lead to a reduction of damage during a major storm event. Portions of the streams are also prone to ice jams. These cause flooding and an increase in erosion due to bed and bank scour, as well as having the potential for causing significant property damage. Significant losses to valuable agricultural land, forestland and property would be mitigated.		Damages Avoided; Evidence of Success	-	
CC-54	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization and clearing/snagging of debris jams from the channel of the Big Salmon Creek, Little Salmon Creek and their tributaries. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Areas where improvements can be made to enhance the streams' ability to reach their floodplain will also be investigated and potential projects proposed. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Cayuga Lake as a result of the reduction of nutrient rich soil particles entering the Lake.	Ongoing	Cost Level of Protection Damages Avoided; Evidence of Success	- - -	Include in new plan (action 007)
CC-55	-	Flood			Ongoing	Cost Level of Protection	- -	Include in new plan (action 007)





Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
			Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization and clearing/snagging of debris jams from the channel of the Seneca River, the Barge Canal and Cayuga/ Seneca Canal. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Areas where improvements can be made to enhance the waterbodies' ability to reach their floodplains will also be investigated and potential projects proposed.		Damages Avoided; Evidence of Success	-	
CC-56	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to identify areas of concern and complete bank stabilization along the Skaneateles Lake lakeshore as needed.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-57	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization, gravel bar removal and/or reshaping and clearing/ snagging of debris jams from the channel of the Sterling Creek, Sterling Valley Creek and their tributaries. Protecting the banks from erosion and removing excess gravel and debris from the watercourses will allow the main flow of the water to remain in the channel. Removal of excessive vegetation, including harmful invasive species is also a priority. Areas where improvements can be made to enhance the streams' ability to reach their floodplains will also be investigated and potential projects proposed. Significant losses to valuable agricultural land, forestland and property would be mitigated.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost		
CC-58	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization along a few reaches of the Sucker Brook watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Areas where improvements can be made to enhance the stream's ability to reach its floodplain will also be investigated and potential projects proposed. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Owasco Lake as a result of the reduction of nutrient rich soil particles entering the Lake. Additional projects listed in the Sucker Brook Streambank Management Plan.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-59	-	Flood	Cayuga SWCD; NYSDEC; USACE;		Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				The Cayuga SWCD proposes to complete bank stabilization along a few reaches of the Veness Brook watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Areas where improvements can be made to enhance the stream's ability to reach its floodplain will also be investigated and potential projects proposed. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Owasco Lake as a result of the reduction of nutrient rich soil particles entering the Lake. Additional projects listed in the Veness Brook Streambank Management Plan.		Damages Avoided; Evidence of Success	-	
CC-60	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization and clearing/snagging of debris jams in the watercourses throughout the Village of Moravia and the Town of Locke. Protecting the banks from erosion and removing excess gravel and debris from the watercourses will allow the main flow of the water to remain in the channels. The SWCD will also work with the Village DPW, Town of Locke Highway and county Highway to properly size culverts and improve the storm sewers.	Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	
						Damages Avoided; Evidence of Success	-	
CC-61	-	Flood			Ongoing	Cost	-	Include in new plan (action 007)
						Level of Protection	-	



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2021 HMP or Discontinue 2. If including action in the 2021 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
			Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization and clearing/snagging of debris jams in the watercourses throughout the Village of Port Byron. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel, thereby reducing the potential for flooding and property damage from bank loss. Portions of the outlet are also prone to ice jams. These cause flooding and an increase in erosion due to bed and bank scour, as well as having the potential for causing significant property damage.		Damages Avoided; Evidence of Success	-	
CC-62	-	Flood	Cayuga SWCD; NYSDEC; USACE;	The Cayuga SWCD proposes to complete bank stabilization as needed along the Yawgers Creek watercourse. Protecting the banks from erosion and removing excess gravel and debris from the watercourse will allow the main flow of the water to remain in the channel. Significant losses to valuable agricultural land, forestland and property would be mitigated. The reduction of soil loss would also be beneficial for the water quality of Cayuga Lake as a result of the reduction of nutrient rich soil particles entering the Lake.	Ongoing	Cost	-	Include in new plan (action 007)
					Level of Protection	-		
					Damages Avoided; Evidence of Success	-		



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The county has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

The emergency upgrades to incorporate activated charcoal filter systems on the City of Auburn, Town of Owasco and Wells College/Village of Aurora water filtration systems, implemented in response to 2016-17 HABS in Owasco and Cayuga Lakes.

Proposed Hazard Mitigation Initiatives for the Plan Update

The county participated in a mitigation action workshop in October 2020 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).

Table 9.1-13 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 9.1-14 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2021-Cayuga County-001	Flood Insurance Outreach	1, 2	All Hazards	<p>Problem: Many residents living outside of the SFHA do not have flood insurance, or know about the NFIP, yet are still affected by flood events and property damages.</p> <p>Solution: Develop and implement an enhanced public outreach / education / information program on natural hazard risks and what they can do in the way of mitigation and preparedness, including flood insurance. This program shall include providing general natural hazard risk, preparedness and mitigation and related NFIP information on the county website and in regular newsletter and mailings; making available for local distribution flyers and other readily available NFIP informational materials; and developing and maintaining a natural hazard risk management webpage on the county website where information, flyers, brochures and mapping can be accessed and distributed to the public and municipalities in support of local outreach efforts.</p>	No	No	Short	County Emergency Response and Communications; CC SWCD	Low	High	County and local budgets; FEMA HMA grants with county match	High	EAP	PI
2021-Cayuga County-002	HMP Outreach Program	All goals	All Hazards	<p>Problem: Cayuga County has struggled to keep communities engaged in the hazard mitigation plan updating process and many municipalities are unaware of the purpose of the plan. Additionally, because of high turnover between of officials in many municipalities, incoming officials are unaware of the hazard mitigation actions and thus are not aware of the ongoing mitigation actions that were developed in the hazard mitigation planning process. And finally, as of 2020, not all municipalities are participating in the hazard mitigation planning process and the county would eventually like to have all municipalities participating members.</p>	No	No	Long	County Emergency Response, FEMA	Medium	High	County Budget, HMA	High	EAP	PI





Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Solution: The county will develop a HMP outreach initiative to help communities keep track of their individual annex along with its mitigation actions and stay informed of any additional mitigation actions taking place within the county. The county would also host an annual event that would inform incoming new officials and remind incumbent officials of the hazard mitigation planning process and progress thus far. Finally, the program would also be meant as a tool to engage non-participant municipalities through public outreach and engagement by the county.										
2021-Cayuga County-003	Flash Flood Control	1, 3, 4	Flood, Severe Storm	<p>Problem: Flash flooding is common throughout all areas of the county, exacerbated by heavy rains and limited stormwater drainage capabilities in rural areas.</p> <p>Solution: Develop and implement a system of highway trenches/green infrastructure solutions to reduce the buildup of water and manage localized and riverine flooding through absorbing rainfall. Examples include rain gardens, and permeable pavements, underground infiltration trenches to redirect water to more open/rural areas away from structures, and planting trees to slow down the flow of water. County DPW will work with CC SWCD and the Highway Department and Water & Sewer to determine the most appropriate project at frequent flooding sites.</p>	No	No	Short	CCSWD, County Hwy, Water & Sewer	High	High	FEMA BRIC; CSC Grant	High	SIP	SP
2021-Cayuga County-004	Sheltering Inventory Study	1, 2, 5	All Hazards	<p>Problem: The county does not have an updated inventory of sheltering locations.</p> <p>Solution: An inventory collection study will be conducted to determine shelter locations within the county that have ADA approved amenities, heating and</p>	Yes	No	Short	Emergency Response and Communications	Low	High	County Budget, FEMA HMA, Red Cross	High	EAP	ES





Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				cooling systems, back-up power, and sufficient capacity.										
2021-Cayuga County-005	HAB Monitoring and Outreach	1, 2, 4, 5	Harmful Algal Bloom	<p>Problem: Harmful Algal Blooms have been documented in waterbodies throughout the county.</p> <p>Solution: Cayuga County Environmental Health should continue to monitor all waterbodies and close beaches and lakes as necessary to prevent exposure. Methods of disrupting and stopping the spread of the algae should be researched and public outreach should be conducted to warn residents when there is a bloom.</p>	No	No	Short	Environmental Health; SWCD	Low	High	County Budget; FEMA HMA	High	NSP	NR
2021-Cayuga County-006	Debris Management Plan	1, 2, 4, 5	All Hazards	<p>Problem: The county does not have a Debris Management Plan.</p> <p>Solution: Developing a debris management plan will allow the county to create actionable steps to monitor, remove, and dispose of debris in a timely manner before and after a hazard occurs.</p>	No	No	Short	County Planning/Emergency Response and Communications	Low	High	County Budget	High	LPR	PR
2021-Cayuga County-007	Streambank Stabilization	All Goals	Flood, Severe Storm, Severe Winter Storm	<p>Problem: Erosion caused by flash flooding is common throughout the county, causing property damages and exacerbating flood risk.</p> <p>Solution: CC SWCD – Support the flood mitigation efforts (e.g. streambank stabilization, drainage and stormwater management, and erosion control activities) of county municipalities and private landowners by providing assistance with grant applications, permit applications and technical evaluation, planning, design and implementation.</p>	No	No	Short	SWCD	High	High	New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG)	High	NSP	NR
2021-Cayuga County-008	Stream Rehabilitation and Management program	1, 4	Flood, Severe Storm, Severe Winter Storm	<p>Problem: Debris from storms can cause erosion and log dams, which result in flooding of streams.</p> <p>Solution: Support Cayuga County SWCD in the development and maintenance of a Stream Rehabilitation and Management program, to assist in erosion control and the removal of debris,</p>	No	No	Short	SWCD	Low	High	FEMA HMGP, County Budget	High	LRP	PR



Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				log jams, etc. in flood vulnerable stream sections.										
2021-Cayuga County-009	Lakeshore Flood Study	1,2,4	Flood	<p>Problem: The shoreline of Lake Ontario has serious erosion occurring to lakefront properties as well as roads along the shoreline. In recent years, some ground failure events occurred due to the extreme erosion along the lake causing a local road to cave and thus leading to accidents.</p> <p>Solution: The county will conduct a study to help determine the best viable solution to understand what needs to be done in order to reduce lakeshore erosion and flooding along with its cascading effects on local communities. This would likely need to be done by the county along with municipalities along the lake, as the project would require the expertise from the County SWCD and cross collaboration between municipalities.</p>	No	No	Medium	Public Works, SWCD	Medium	High	County Budget, HMGP, Climate Smart Communities Grant Program	High	LPR	PR
2021-Cayuga County-010	Intermunicipal Water Supply Expansion Project	1,3,4	Harmful Algal Bloom	<p>Problem: The City of Auburn and other municipalities that share an intermunicipal public water supply have continuously been impacted by Harmful Algal Bloom and subsequent degraded water supply from Owasco and Cayuga Lakes.</p> <p>Solution: The county and the Water/Sewer Authority is undergoing an expansion of the local water supply system. While the City of Auburn is the primary stakeholder in this project, because the intermunicipal characteristics of this project, the county would play a critical role in coordinating the project which would be to connect the Owasco Lake Watershed water supply with the Cayuga Lake Watershed water supply.</p>	No	No	Long	Sewer and Water Authority, Cayuga County Planning, SWCD	High	High	HMGP, HMA, Climate Smart Communities Grant, County Budget	High	SIP	SP



Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2021-Cayuga County-011	Power Grid Redevelopment Project	1,3	Severe Storms, Severe Winter Storms	<p>Problem: Many municipalities in Cayuga County experience frequent power outage due to poor electrical grid system throughout the county.</p> <p>Solution: Work with individual municipalities to understand the specific locations that continue to be vulnerable to severe storms and work with NYSEG to upgrade electrical grid infrastructure.</p>	No	No	Long	Cayuga County Public Works, NYSEG, National Grid	High	High	NYSEG/ National Grid, FEMA HMGP, County Budget	Medium	SIP	SP
2021-Cayuga County-012	Cayuga Hemlock Woolly Adelgid Eradication Program	All Goals	Flood	<p>Problem: The county continues to struggle with the spread of the invasive species Hemlock Woolly Adelgid which infects large populations of Hemlock tree. Because many Hemlock trees are found in ravines along the hillside and has a root system that prevents the slope from erosion, the infection and decreasing population of the tree has led to vulnerable hillsides and subsequent erosion.</p> <p>Solution: While there is no direct solution to addressing this issue, the county will work with the New York State Department of Environmental Conservation to closely monitor and eliminate any sign of HWA. A mitigation program on the county level will need to be developed to strictly control the invasive species and prevent spread across the county.</p>	No	No	Long	SWCD, Cayuga CCE, Planning	Medium	Medium	FEMA HMA, HMGP, County Budget	Medium	EAP	NR
2021-Cayuga County-013	Rail Line Barrier Development	1	Transportation Hazard	<p>Problem: Various municipalities in Cayuga County are vulnerable to railroad related hazards. This is especially the case for municipalities along Cayuga Lake and along Interstate Highway 90 where most rail lines are located. While some areas have railroad crossings, many rural areas do not have any rail protective guard rail/ safe railroad crossing.</p>	No	No	Long	CC Planning/ Public Works	High	High	Municipal Budget, NYSDOT	Medium	SIP	SP



Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>Solution: Work with municipalities that have rail lines going through their community and evaluate potential vulnerability to railroad infrastructure. Work with respective rail companies and coordinate potential solutions to developing protective barriers along the rail line. Given the rail line is not under county ownership, each municipality and county, along with the NYSDOT would need to identify negotiations to redevelop railroad crossings and increase safety measures.</p>										
2021-Cayuga County-014	Bridge Inventory	1	Transportation	<p>Problem: The county does not have adequate information on existing bridges and their maintenance status within the county.</p> <p>Solution: Develop an inventory of and evaluate private bridges throughout Cayuga County.</p>	No	No	Long	SWCD, Public Works	High	High	Municipal Budget, County Budget	Medium	LPR	PR
2021-Cayuga County-015	Mitigation Action Updating	1,2,3	All Hazards	<p>Problem: Previous updates for Hazard Mitigation Plans have been a struggle for many municipalities due to change in leadership between hazard mitigation planning updates. To mitigate future confusion, the county needs to keep an up to date status of all mitigation efforts so incoming municipal officials know the status of each action.</p> <p>Solution: The County shall hire an annual summer intern to go through all county AND municipal mitigation actions provided in the hazard mitigation plan and contact each county and municipal department/ entity involved in mitigation actions. The intern would then update the status of the mitigation actions and compile in a database that would be updated the following year and would be publicly available to all incoming municipal officials.</p>	No	No	Long	County with municipal participation	Medium	High	County Budget	High	EAP	PR, PI





Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2021-Cayuga County-016	Temporary Housing Identification and Designation	All goals	All Hazards	<p>Problem: The county has not developed a list of Temporary housing locations within the county. The county does have existing land that could be considered for temporary housing; however, it has not officially designated any land as of 2020.</p> <p>Solution: The county will need to work with the individual landowners and consult with municipal stakeholders on potential sites for temporary housing. Once an inventory of temporary housing locations is established, the county will then officially need to designate each site and work with landowners to understand existing sources of utilities and other services in the region and develop any backup power sources as needed.</p>	No	No	Long	County Emergency Management; municipalities; private landowners.	Medium	High	County Budget	High	LPR	PR
2021-Cayuga County-017	Hazard Event Documentation	2,3,4	Flood, Severe Storm, Severe Winter Storm, Drought	<p>Problem: Many municipalities in the county do not have a formal storm event damage documentation system in place. As a result, during annex updates, municipalities are unable to provide input on damages incurred from storm event and thus cannot determine potential high cost vulnerabilities.</p> <p>Solution: The county HMP Coordinator shall coordinate with all municipal highway superintendents and other public works officials to implement a storm event documentation system on an annual basis. An excel spreadsheet or online survey reporting system (example below) can be used to update property and infrastructure damages incurred by each municipality. For the excel spreadsheet, the County would need to provide a list of hazard events each year extracted from the NOAA storm event database and send each municipality the separate excel spreadsheet to input data each year. The county would be in charge of collecting</p>	No	No	Long	County with municipal participation	Low	High	County Budget as needed	High	EAP	PR, PI





Table 9.1-13. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				and curating this information that will be used during the updating process for the Hazard Mitigation Plan. The survey form on the other hand could be posted on county and municipal websites for community members and officials to report damages. Microsoft Forms: https://arcg.is/TrL4C1										

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
- EHP Environmental Planning and Historic Preservation
- FEMA Federal Emergency Management Agency
- FPA Floodplain Administrator
- HMA Hazard Mitigation Assistance
- N/A Not applicable
- NFIP National Flood Insurance Program
- OEM Office of Emergency Management

Potential FEMA HMA Funding Sources:

- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant Program
- PDM Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

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 9.1-14. 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
2021-Cayuga County-001	Flood Insurance Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Cayuga County-002	HMP Outreach Program	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Cayuga County-003	Flash Flood Control	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-004	Sheltering Inventory Study	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-005	HAB Monitoring and Outreach	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-006	Debris Management Plan	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-007	Streambank Stabilization	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-008	Stream Rehabilitation and Management program	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-009	Lakeshore Flood Study	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-010	Intermunicipal Water Supply Expansion Project	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2021-Cayuga County-011	Power Grid Redevelopment Project	1	1	1	0	0	0	-1	1	1	0	1	1	1	1	8	Medium
2021-Cayuga County-012	Cayuga Hemlock Woolly Adelgid Eradication Program	1	1	1	-1	-1	-1	-1	1	1	1	1	1	1	1	6	Medium
2021-Cayuga County-013	Rail Line Barrier Development	1	1	1	1	-1	-1	-1	0	1	1	1	1	1	1	7	Medium
2021-Cayuga County-014	Bridge Inventory	1	1	1	0	0	0	-1	1	1	0	1	1	1	1	8	Medium
2021-Cayuga County-015	Mitigation Action Updating	1	1	1	0	1	1	1	1	1	0	1	1	1	1	12	High
2021-Cayuga County-016	Temporary Housing Identification and Designation	1	1	1	1	1	0	0	1	1	0	1	1	1	1	11	High



Table 9.1-14. 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
2021-Cayuga County-017	Hazard Event Documentation	1	1	1	1	1	1	1	1	1	0	1	1	1	1	13	High

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



9.1.8 Proposed Mitigation Action Types

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
Disease Outbreak	006; 015; 016			001; 002; 004; 015	006; 015; 016		001; 002; 015			004
Drought	006; 015; 016			001; 002; 004; 015; 017	006; 015; 016; 017		001; 002; 015; 017			004
Flood	006; 008; 009; 015; 016	003	007	001; 002; 004; 012; 015; 017	006; 008; 009; 015; 016; 017		001; 002; 015; 017	007; 012	003	004
HABs	006; 015; 016	010	005	001; 002; 004; 015	006; 015; 016		001; 002; 015	005;	010	004
Severe Storm	006; 008; 015; 016	003; 011	007	001; 002; 004; 015; 017	006; 008; 015; 016; 017		001; 002; 015; 017	007	003; 011	004
Severe Winter Storm	006; 008; 015; 016	011	007	001; 002; 004; 015; 017	006; 008; 015; 016; 017		001; 002; 015; 017			004
Transportation	006; 015; 016	013		001; 002; 004; 015	006; 014; 015; 016		001; 002; 015		013	004

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

9.1.9 Staff and Local Stakeholder Involvement in Annex Development

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: Planning, Emergency Services, Highway, and Soil and Water Conservation District. The Emergency Services represented the community on the Cayuga 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.





Additional documentation on the county’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix B (Meetings).



Action Worksheet			
Project Name:	HMP Outreach Program		
Project Number:	2021-Cayuga County -002		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	Cayuga County has struggled to keep communities engaged in the hazard mitigation plan updating process and many municipalities are unaware of the purpose of the plan. Additionally, because of high turnover between officials in many municipalities, incoming officials are unaware of the hazard mitigation actions and thus are not aware of the ongoing mitigation actions that were developed in the hazard mitigation planning process. And finally, as of 2020, not all municipalities are participating in the hazard mitigation planning process and the county would eventually like to have all municipalities participating members.		
Action or Project Intended for Implementation			
Description of the Solution:	The county would like to propose the development of a HMP outreach initiative to help communities keep track of their individual annex along with its mitigation actions and stay informed of any additional mitigation actions taking place within the county. The county would also host an annual event that would inform incoming new officials and remind old officials of the hazard mitigation planning process and progress thus far. Finally, the program would also be meant as a tool to engage non-participant municipalities through public outreach and engagement by the County.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Keep HMP up-to-date, inform residents of HMP, inform municipal officials of HMP process
Useful Life:	NA	Goals Met:	All goals
Estimated Cost:	\$100,000	Mitigation Action Type:	EAP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately after funding received
Estimated Time Required for Project Implementation:	1-5 years	Potential Funding Sources:	County Budget, HMA
Responsible Organization:	Cayuga Emergency Services	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Hire a consultant to conduct outreach	High	Same goal accomplished but more expensive.
	HMP Outreach program	Medium	Community engaged at lower cost to county.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	HMP Outreach Program	
Project Number:	2021-Cayuga County -002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This program would promote the HMP which would save life and property from hazards
Property Protection	1	This program would promote the HMP which would save life and property from Hazards
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	Project is technically feasible
Political	1	There are no political issues
Legal	1	There are no legal complications
Fiscal	0	The county might need external funding, based on the overall scope of project
Environmental	1	This has a positive environmental impact
Social	1	This has a positive social impact
Administrative	1	The administration is supportive of this project.
Multi-Hazard	1	This project would support all hazards of concern.
Timeline	1	The timeline is feasible.
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	13	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Lakeshore Flood Study		
Project Number:	2021-Cayuga County-009		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	The shoreline of Lake Ontario has serious erosion occurring to lakefront properties as well as roads along the shoreline. In recent years, some ground failure events occurred due to the extreme erosion along the lake causing a local road to cave and thus leading to accidents. At the same time, Lake Ontario is international waters and water levels and other factors cannot be controlled by the County and would require collaboration on an international level which makes developing solutions for this flooding issue more complex than other lakeshore flooding.		
Action or Project Intended for Implementation			
Description of the Solution:	The County would need to conduct a study to help determine the best viable solution to understand what needs to be done in order to reduce lakeshore erosion and flooding along with its cascading effects on local communities. This would likely need to be done by the County along with municipalities along the lake, as the project would require the expertise from the County SWCD and cross collaboration between municipalities. Structural projects would likely need to be the primary solution given the Lake levels cannot be controlled solely by Cayuga County.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	High	Estimated Benefits (losses avoided):	Increase understanding of potential solutions to lakeshore flooding and erosion.
Useful Life:	10-15 years	Goals Met:	1,2, and 4
Estimated Cost:	High	Mitigation Action Type:	LPR
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately after funding received
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	County Budget, HMGP, Climate Smart Communities Grant Program
Responsible Organization:	Cayuga Public Works, SWCD	Local Planning Mechanisms to be Used in Implementation if any:	Local Land use regulations, zoning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate all homes that are flooding along the lake	High	The price of this is extremely high, and the problem is likely to continue, though might not damage properties as often.
Acquire all homes that are flooding along the lake	High	Not feasible; costly; loss tax base	
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Lakeshore Flood Study	
Project Number:	2021-Cayuga County-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This project would save life and property during a flood event.
Property Protection	1	This project would save life and property during a flood event.
Cost-Effectiveness	1	Benefits outweigh the costs
Technical	1	Project is technically feasible
Political	1	There are no political issues
Legal	1	There are no legal complications
Fiscal	-1	The county might need external funding, based on the overall scope of project
Environmental	1	This has a positive environmental impact
Social	1	This has a positive social impact
Administrative	1	The administration is supportive of this project.
Multi-Hazard	1	This project would support all hazards of concern.
Timeline	1	The timeline is feasible.
Agency Champion	1	Yes
Other Community Objectives	1	Yes
Total	12	
Priority (High/Med/Low)	High	