



1. INTRODUCTION

1.1 BACKGROUND

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for local hazard mitigation. Such planning efforts can generate a unified local voice on hazard mitigation, with cross-jurisdictional support for a hazard mitigation plan’s recommended mitigation actions. They also help to form working relationships among participants’ emergency managers, floodplain administrations, and other development agencies (FEMA 2021). Eligible participants for multi-jurisdiction hazard mitigation plans are local governments defined as follows in Title 44 of the Code of Federal Regulations, Part 201 (Mitigation Planning):

“Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.” (44 CFR Section 201.2)

In multi-jurisdictional hazard mitigation planning, every participating jurisdiction must meet the federal requirements for local mitigation planning. This means that each jurisdiction must actively participate in the planning process and must officially adopt the plan (44 CFR Section 201.6a(4)).

For the Seneca County Hazard Mitigation Plan (HMP), a Planning Partnership was formed to leverage resources and to meet the federal local mitigation planning requirements for as many eligible governments in the County as possible. Members of the Planning Partnership consisted of representatives from each participating jurisdiction. Seneca County was the lead agency for this planning effort and directed the planning process with assistance from a contract planning consultant (Tetra Tech). A Steering Committee with broad representation across the county provided guidance and direction for the HMP planning process. Each participating planning partner has prepared a jurisdictional annex to this plan.

This chapter describes the Seneca County HMP Planning Partnership, its responsibilities throughout the planning process, and the jurisdictional annexes developed as a result of the plan update efforts. The remaining chapters in this volume of the HMP present the annexes for each participating jurisdiction.

1.2 PLANNING PARTNER INVOLVEMENT

1.2.1 Initial Solicitation

Seneca County solicited the participation of all eligible jurisdictions in the County at the commencement of this project. The following is a list of the jurisdictions that participated in the update process and have met the minimum requirements of participation as established by the County and the Steering Committee:



- Seneca County
- Town of Covert
- Town of Fayette
- Village of Interlaken
- Town of Junius
- Town of Lodi
- Village of Lodi
- Town of Ovid
- Village of Ovid
- Town of Romulus
- Town of Seneca Falls
- Town of Tyre
- Town of Varick
- Town of Waterloo
- Village of Waterloo

1.2.2 Planning Partner Expectations

The following list of planning partner expectations was agreed to by all participants:

- Identify municipal representatives to serve as the planning points of contacts. These people were responsible for representing the community and assuring that these participation expectations are met by their community.
- Support the Steering Committee selected to oversee the development of this plan.
- Provide representation at municipal Planning Committee meetings
- Provide data and information about the community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - New development and anticipated development
 - Natural hazard risk areas
 - Natural hazard events and losses that have impacted the community in the last five years
 - Plans, studies, reports, and ordinances addressing natural hazard risk
 - Mitigation activity in the community in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts in the community, which may include:
 - Providing notices of the planning project on the municipal website with links to a County project website
 - Providing notice of the planning project, the availability of plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in the area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in the community.
- Assist with the identification of stakeholders within the community who should be informed and potentially involved with the planning process.

The **Planning Partnership** is responsible for developing and reviewing draft sections of the hazard mitigation plan, creating the mitigation strategy for their jurisdiction, and adopting the final plan. Members of the Planning Partnership have the expertise to develop the plan and have their jurisdiction's authority to implement the mitigation strategy developed during the planning process.



- Complete data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant (or high or medium) risk to the community.
- Involve the local NFIP Floodplain Administrator in the planning process.
- Review draft plan sections when requested and provide comment and input as appropriate.
- Adopt the plan by resolution of the local governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

Under the plan implementation and maintenance protocol established in Volume I of the HMP, it is intended that the Planning Partnership will remain active to support maintenance of the HMP after the plan has been adopted. By adopting this plan, each planning partner agrees to the plan implementation and maintenance protocol. Given that individual commitments change over time, it will be the responsibility of each jurisdiction and its points of contact to inform the County's coordinator for this HMP of any changes in representation.

1.3 JURISDICTIONAL ANNEX PREPARATION PROCESS

Jurisdictional annexes provide a unique, stand-alone guide to mitigation planning for each jurisdiction participating in a multi-jurisdiction HMP. The Seneca County HMP is organized so that there is an annex for Seneca County and for every municipality within the County's borders.

Workshops and additional meetings (in person, by email, or by teleconference) to complete the jurisdictional annexes were held with the County, the contract consultant, and the Steering Committee throughout the planning process. Details regarding these meetings are described further in Volume I.

1.3.1 Incorporation of Information from Previous HMP

In order to facilitate the update of the jurisdictional annexes, data from the 2019 Seneca County HMP annexes was transferred to the most current annex format, which has evolved to meet changing federal and state criteria. Clear instructions were provided to the representatives of each planning partner. This transfer of information provided a basis to address the following:

- Changes in local capabilities and vulnerabilities
- The current status of the 2019 HMP mitigation strategy
- A new mitigation strategy to address identified issues and to increase community resiliency

1.3.2 Kickoff Meeting

The County invited all municipalities to participate in a planning partner kickoff meeting held on November 2, 2023, to provide an overview of the planning process, including meetings and worksheets that would be used to gather information for annex preparation. Key elements of the worksheets were discussed and subsequently completed by the appropriate jurisdictional personnel for each worksheet. The worksheets were collected, and the information was incorporated into each jurisdictional annex. In the event additional information was needed, the jurisdictional point of contact was contacted to provide more input into their annex.



1.3.3 Hazard Ranking Exercise

At the risk assessment meeting on September 19, 2024, the consultant summarized the findings of the risk assessment for the hazards of concern evaluated in this HMP, including an initial ranking of hazards using the risk-related ranking methodology described in Volume I. Each planning partner was asked to review the hazard ranking for its jurisdiction and revise as appropriate based on history of events, probability of occurrence, and the potential impact on people, property, and the economy. This exercise familiarized the planning partners with how to use the risk assessment as a tool to support other planning and hazard mitigation processes and to help prioritize types of mitigation actions that should be considered. Hazards that were ranked as “high” for each jurisdiction as a result of this exercise were considered to be priorities for identifying appropriate mitigation actions, although jurisdictions also identified actions to mitigate “medium” or “low” ranked hazards as appropriate.

1.3.4 Mitigation Strategy Workshop

A mitigation strategy workshop was held on September 19, 2024, to provide an overview on how to develop a strong mitigation strategy. In preparation for this workshop, the consultant provided a list of problem areas and vulnerabilities identified during the planning process, along with feedback from the citizen survey, to support the development of relevant projects for the mitigation strategy.

This workshop included the development of focused problem statements based on the impacts of natural hazards in the County and its communities. These problem statements provide detailed descriptions of problem areas, including known impacts on the jurisdiction (past damage, loss of service, etc.). Where possible, the statements include the street address of the problem location, adjacent streets, water bodies, and well-known structures as well as a brief description of existing site conditions (topography, terrain, hydrology). The problem statements form a bridge between the risk assessment (which quantifies impacts on each community), the capability assessment (which identifies capabilities for reducing hazard risks and supporting hazard mitigation), and the development of actionable mitigation strategies.

The County and the mitigation consultant worked with each jurisdiction to identify clear, implementable mitigation actions and to further support the completion of the jurisdictional annexes.

1.4 JURISDICTIONAL ANNEX FORMAT

The jurisdictional annex format is designed to document local compliance with the 44 CFR local mitigation planning regulations. It also achieves the following:

- Providing a locally relevant synthesis of the overall mitigation plan that can be readily presented, distributed, and maintained
- Facilitating local understanding of the community’s risk from natural hazards
- Facilitating local understanding of the community’s capabilities to manage natural hazard risk, including opportunities to improve those capabilities
- Facilitating local understanding of the efforts the community has taken, and plans to take, to reduce its natural hazard risk
- Facilitating the implementation of mitigation strategies, including the development of grant applications
- Providing a framework by which the community can continue to capture relevant data and information for future plan updates



The following are the elements of the jurisdictional annex.

- **Section X.1: Hazard Mitigation Planning Team:** Identifies the hazard mitigation planning primary and alternate contacts and floodplain administrator. Provides details on which departments were involved in the development of the jurisdictional annex. The widest range of departments, stakeholders, and persons familiar with the jurisdiction should be involved in the development of the jurisdictional annexes. Further detail on participants is provided in Volume I.
- **Section X.2: Community Profile:** Provides a profile of the jurisdiction, including population and socially vulnerable populations.
- **Section X.3: Jurisdictional Capability Assessment and Integration:** Provides an inventory and evaluation of the jurisdiction's tools, mechanisms, and resources available to support hazard mitigation and natural hazard risk reduction. Tables provide an inventory of the jurisdiction's planning, regulatory, administrative, technical, and fiscal capabilities, its level of participation in state and federal programs designed to promote and incentivize local risk reduction efforts, and its adaptive capacity to adjust to damage and respond to consequences.
- **Section X.4: National Flood Insurance Program (NFIP) Compliance:** Summarizes jurisdiction-specific information related to managing and regulating the regulatory floodplain, including current and future compliance with the NFIP.
- **Section X.5: Growth/Development Trends:** Summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.
- **Section X.6: Jurisdictional Risk Assessment:** Provides information regarding each jurisdiction's vulnerability to the identified hazards. Full data and information on the hazards of concern, the methodology used to develop the vulnerability assessments, and the results of those assessments that serve as the basis of these local hazard rankings may be found in Volume I.
 - **Hazard Area:** Each annex includes a map (or series of maps) illustrating identified hazard zones and critical facilities. The maps also show areas of known or anticipated future development, as available.
 - **Hazard Event History:** Identifies hazard events that have caused significant impacts within the jurisdiction, including a summary characterization of those impacts identified by the jurisdiction.
 - **Hazard Ranking and Vulnerabilities:** Each jurisdiction has differing degrees of risk exposure and vulnerability. The local hazard ranking identifies each jurisdiction's local degree of risk to each hazard, supporting the selection and prioritization of actions to reduce the highest levels of risk for each community.
 - **Critical Facilities:** Identifies potential flood losses to critical facilities in the jurisdiction based on the flood vulnerability assessment process presented in Volume I.
 - **Identified Issues:** Presents other specific hazard vulnerabilities as identified by the jurisdiction.
- **Section X.7: Mitigation Strategy and Prioritization:** Discusses and provides the status of past mitigation actions and status and describes proposed hazard mitigation actions and prioritization.
 - **Past Mitigation Action Status:** Where applicable, a review of progress on the jurisdiction's prior mitigation strategy is presented, identifying the disposition of each prior action in the jurisdiction's updated mitigation strategy. Other completed or ongoing mitigation activities that were not specifically part of a prior local mitigation strategy may be included in this subsection as well.
 - **Completed Mitigation Actions Not Identified in the Previous Mitigation Strategy:** Other completed or ongoing mitigation activities that were not specifically part of a prior local mitigation strategy may be included in this subsection as well.



- **Proposed Hazard Mitigation Actions for the Plan Update:** Tables and action worksheets at the end of each annex present the jurisdiction’s updated mitigation strategy, a summary of the local mitigation strategy prioritization and a summary of the action categories and hazards addressed.

Each jurisdiction’s annex is a living document that will continue to be improved as resources permit. Continued efforts to maintain the annex will ensure that it remains current and will improve its effectiveness as the key tool, reference, and guiding document by which the jurisdiction will implement hazard mitigation locally.

1.5 COVERAGE UNDER THE PLAN

Of the 15 original planning partners, 14 fully met the participation requirements specified by the Steering Committee and have annexes included in this volume. Those that did not meet the requirements will not be able to seek FEMA or state approval at the time of plan submittal, nor will they be eligible to obtain FEMA grant funding. Table 1-1 lists the status of each jurisdiction. Note that participation in scheduled Planning Partnership meetings provides only a partial indication of the level of participation of each jurisdiction. Appendices in Volume I provide details on further participation and meeting attendance.

Table 1-1. Jurisdictional Status

Jurisdiction	Attended Workshops, Meetings, and Calls	Provided Update on Past Projects	Submitted Mitigation Actions for Current Plan	Seeking Approval for Adoption (meets all previous requirements)
Seneca County	Y	Y	Y	Y
Town of Covert	Y	Y	Y	Y
Town of Fayette	Y	Y	Y	Y
Village of Interlaken	Y	Y	Y	Y
Town of Junius	Y	Y	Y	Y
Town of Lodi	Y	Y	Y	Y
Village of Lodi	Y	Y	Y	Y
Town of Ovid	Y	Y	Y	Y
Village of Ovid	Y	Y	Y	Y
Town of Romulus	Y	Y	Y	Y
Town of Seneca Falls	Y	Y	Y	Y
Town of Tyre	Y	Y	Y	Y
Town of Varick	Y	Y	Y	Y
Town of Waterloo	Y	Y	Y	Y
Village of Waterloo	Y	Y	Y	Y



2. COUNTY OF SENECA

This jurisdictional annex to the Seneca County Hazard Mitigation Plan HMP provides information to assist public and private sectors in the County of Seneca with reducing losses from future hazard events. This annex is not guidance of what to do when a disaster occurs; its focus is on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex presents a general overview of the County of Seneca, describes who participated in the planning process, assesses the County of Seneca’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

2.1 HAZARD MITIGATION PLANNING TEAM

The County of Seneca identified the hazard mitigation plan (HMP) primary and alternate points of contact and developed this plan over the course of several months with input from many County departments, including the Highway Department. The Emergency Management Director represented the community on the Seneca 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.

Table 2-1 summarizes County officials who participated in the development of the annex and in what capacity. Additional documentation of the County’s planning activities through Planning Partnership meetings is included in Volume I.

Table 2-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Melissa Taylor, Emergency Management Director Address: 1 DiPronio Drive, Waterloo, NY 13165 Phone Number: (315) 539-3728 Email: mtaylor@co.seneca.ny.us	Name/Title: Toni DiGiovanni, Deputy Emergency Manager Address: 1 DiPronio Drive, Waterloo, NY 13165 Phone Number: (315) 539-9421 Email: tdigiovanni@co.seneca.ny.us
National Flood Insurance Program Floodplain Administrator	
Name/Title: Mark Shaw, Code Enforcement Officer Address: 1 DiPronio Drive, Waterloo, NY 13165 Phone Number: (315) 539-1628 Email: mshaw@co.seneca.ny.us	
Additional Contributors	
Name/Title: Kristopher Rodger, Public Safety Administrator Method of Participation: Provided key input in the planning process, including completing worksheets and attending meetings.	
Name/Title: Roy Gates, Highway Superintendent Method of Participation: Provided key input in the planning process, including completing worksheets and attending meetings.	
Name/Title: Mark D. Shaw, Code Enforcement Officer Method of Participation: Provided key input in the planning process, including completing worksheets.	
Name/Title: Jeffrey Case, Fire Coordinator Method of Participation: Provided key input in the planning process, including attending meetings.	



Name/Title: Michael Enslow

Method of Participation: Provided key input in the planning process, including attending meetings.

2.2 COMMUNITY PROFILE

Seneca County is situated upstate in the heart of the New York's Finger Lakes Region. The county is bounded by the Lake Ontario plain to the north, the central Southern Tier region to the south, Cayuga and Seneca lakes form portions of its east and west borders and it is traversed from east to west by the Erie Canal and New York State Thruway. The County extends 35 miles from north to south and about eight to ten miles from east to west. Seneca County is bounded by Wayne County to the north, Cayuga and Tompkins counties to the east, Tompkins and Schuyler counties to the south and by Yates and Ontario counties to the west.

Research has shown that some populations are at greater risk from hazard events because of decreased resources or physical abilities. These populations can be more susceptible to hazard events based on a number of factors including their physical and financial ability to react or respond during a hazard, and the location and construction quality of their housing. Data from the 2023 American Community Survey (ACS) indicates that 5.4 percent of the population is 5 years of age or younger, 20.1 percent is 65 years of age or older, 0.6 percent is non-English speaking, 12.3 percent is below the poverty threshold, and 16 percent is considered disabled.

2.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

The County of Seneca performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume I describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment for this annex includes analyses of the following:

- Planning and regulatory capabilities
- Development and permitting capabilities
- Administrative and technical capabilities
- Fiscal capabilities
- Education and outreach capabilities
- Classification under various community mitigation programs
- Adaptive capacity to withstand hazard events

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into day-to-day local government operations. As part of the hazard mitigation analysis, planning and /policy documents were reviewed and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. Development of an updated mitigation strategy provided an opportunity for the County of Seneca to identify opportunities for integrating mitigation concepts into ongoing County procedures.

2.3.1 Planning and Regulatory Capability and Integration

Table 2-2 summarizes the planning and regulatory tools that are available to the County of Seneca.



Table 2-2. Planning and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations				
Building Code	Yes	Uniform Fire Prevention and Building Code, 2021	State and County	NYS Division of Building Standards and Codes or Seneca County Building Codes Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Strong building codes for fire prevention, the widening use of smoke detectors and sprinklers and development of fire-resistant building materials represent fire mitigation actions that have made a huge impact on reducing private and public losses from fires. Strengthened building codes in floodplains, managing development in a way that recognizes flood risks and infrastructure improvements that prevent or resist flood damage are very cost-effective mitigation goals for any community.				
Zoning/Land Use Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This is kept at the Jurisdictional level.				
Subdivision Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This is kept at the Jurisdictional level.				
Site Plan Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This is kept at the Jurisdictional level.				
Stormwater Management Code	Yes	Seneca County Watershed Protection Law	State and County	NYS Department of Environmental Conservation or Seneca County Health Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The design, construction, operation and maintenance of wastewater treatment systems located wholly or partially within Seneca County, with the exception of municipal owned wastewater treatment plants permitted by New York State Department of Environmental Conservation, shall be subject to the requirements of this article. The requirements of this article are in addition to, and not in lieu of, the requirements for wastewater treatment systems set forth in 10 NYCRR Appendix 75-a of Part 75.				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Real Estate Disclosure Requirements	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Flood Damage Prevention Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Planning Documents				
General/Comprehensive Plan	Yes	Seneca County Comprehensive Plan	County	Planning and Community Development
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Seneca County Comprehensive Plan was last updated in the late 1970s. The Seneca County Department of Planning and Community Development has been in the process of updating this Plan in a “notebook” format. As each individual plan was adopted, it was ready to become a “chapter” within the overall Seneca County Comprehensive Plan.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Disaster Debris Management Plan	Yes	Seneca County Debris Management Plan	County	Emergency Management
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
N/A				
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Agriculture Plan	Yes	Agricultural and Farmland Enhancement Plan, 2021	County	Soil and Water Conservation District
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The mission of this Seneca County Agricultural and Farmland Enhancement Plan is to provide information and strategies that can be used short and long-term to enhance the economic success of agriculture in Seneca County and preserve the land upon which it depends.				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
N/A				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Other-Housing Plan	Yes	Housing Plan, 2023	County	Planning and Community Development
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This report functions as a focused set of analyses and evaluations of socio-economic, demographic, and housing market conditions in Seneca County. Its purpose is to support the County and community stakeholders in developing and implementing policies, programs, and strategies to address current and future housing needs and preferences, situated on the backdrop of an ongoing, statewide housing crisis.				
Response/Recovery Planning				
Emergency Operations Plan	Yes	Seneca County Comprehensive Emergency Management Plan, 2024	County	Seneca County Emergency Management Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Provides a framework for mitigating, preparing for, responding to and recovering from disasters. It defines the roles and responsibilities of different agencies and stakeholders in dealing with various types of hazards.				
Continuity of Operations Plan	Yes	Continuity of Operations Plan, 2024	County	Seneca County Emergency Management Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Identifies and describes the process of how to continue identified critical functions under a broad range of emergencies, including localized acts of nature, accidents, and technological or attack-related emergencies.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
Public Health Plan	Yes	Seneca County Pandemic Plan	County	Seneca County Emergency Management Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The plan was developed based on best practices and guidance available largely as a result of the SARS-CoV-2 Pandemic. The plan is intended to provide ongoing guidance for the current pandemic as well as future guidance for any other infectious disease outbreaks requiring a state and/or county emergency declaration.				
Other- CEPA	Yes	Seneca County CEPA	County	Seneca County Emergency Management Office

How has or will this be integrated with the HMP and how does this reduce risk?
 Redoing the plan; the State is working with the County- in line for a 2025 update.

2.3.2 Development and Permitting Capability

Table 2-3 summarizes the capabilities of the County of Seneca to oversee and track development.

Table 2-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	-
<ul style="list-style-type: none"> If you issue development permits, what department is responsible? 	N/A	Code Enforcement
<ul style="list-style-type: none"> If you do not issue development permits, what is your process for tracking new development? 	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain development permits
Do you have a buildable land inventory?	Yes	-
<ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	N/A	The County is 30 percent built out
Describe the level of build-out in your jurisdiction.	N/A	The County is 30 percent built out

2.3.3 Administrative and Technical Capability

Table 2-4 summarizes potential staff and personnel resources available to the County of Seneca and their current responsibilities that contribute to hazard mitigation.

Table 2-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Responsible for comprehensive countywide planning, economic development coordination, tourism promotion,



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		community development program implementation, review of local land use referrals, and environmental reviews.
Zoning Board of Adjustment	No	-
Planning Department	Yes	The Planning Department promotes the sound and orderly economic and physical growth of Seneca County and its constituent municipalities. It is responsible for comprehensive countywide planning, economic development coordination, tourism promotion, community development program implementation, review of local land use referrals, and environmental reviews. Additionally, the Department is responsible for administering the overall development of the Finger Lakes Regional Airport, providing planning and grant writing assistance to local governments, and managing the Agricultural District Program.
Mitigation Planning Committee	Yes	Core Planning Team, Steering Committee
Environmental Board/Commission	Yes	Agriculture and Environmental Affairs Committee Responsible for Agriculture Districts, Cornell Cooperative Extension Service, Soil & Water Conservation Districts, Lake "weed control", Clean "Green" Energy, County Solid Waste Management Plan, and keeping the Board of Supervisors abreast of those activities within Seneca County and their potential environmental impacts.
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Economic Development and Tourism Committee Responsible for the Planning & Community Development Department, Planning Board, Industrial Development Agency, Tourism Promotion Agency, Finger Lakes Regional Airport, and all Federal and State grants.
Public Works/Highway Department	Yes	The construction and maintenance of county roads and bridges are handled by the Highway Department.
Construction/Building/Code Enforcement Department	Yes	Provides permitting to guide safe construction and development within Seneca County.
Emergency Management/Public Safety Department	Yes	The Seneca County Emergency Management Office serves as the authority for organization of resources and planning for hazard events for all municipalities within the County.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Stormwater, tree trimming, road maintenance
Mutual aid agreements	Yes	Soil and Water State DOT shared services
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning; IDA
Engineers or professionals trained in building or infrastructure construction practices	Yes	Codes
Planners or engineers with an understanding of natural hazards	No	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Codes
Personnel skilled or trained in GIS and/or Hazus applications	Yes	Planning and Emergency Management
Staff that work with socially vulnerable populations or underserved communities	Yes	Seneca County Community Counseling Center, Seneca County Community Service Board, Seneca County Crisis Response Team, Seneca County Health Department, Seneca County Human Services, Seneca County Office for the Aging, Seneca County Veterans Service Agency, Seneca County Workforce Development and Youth Bureau, Seneca County Youth Counseling Services
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Provide vision, direction and subject matter expertise in the field of emergency management to heighten our state of emergency readiness.
Grant writer(s)	Yes	Finance
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Soil and Water

2.3.4 Fiscal Capability

Table 2-5 summarizes financial resources available to the County of Seneca.

Table 2-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes- In Towns and Villages. Not County
Capital improvements project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

2.3.5 Education and Outreach Capability

Table 2-6 summarizes the education and outreach resources available to the County of Seneca.

Table 2-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	Yes	Information Technology Department
Hazard mitigation information available on your website	Yes	Seneca County Emergency Management Website
Social media for hazard mitigation education and outreach	Yes	Public Health
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Seneca County E-911 utilizes the Hyper-Reach System as a way of notifying the community of emergency situations such as: <ul style="list-style-type: none"> • Shelter in place • Missing persons • Any other situation occurring that would require a mass notification in a short period of time
Natural disaster/safety programs in place for schools	No	-



Outreach Resources	Available? (Yes/No)	Comment:
Organizations that conduct outreach to socially vulnerable populations and underserved populations	Yes	Seneca County Community Counseling Center, Seneca County Community Service Board, Seneca County Crisis Response Team, Seneca County Health Department, Seneca County Human Services, Seneca County Office for the Aging, Seneca County Veterans Service Agency, Seneca County Workforce Development and Youth Bureau, Seneca County Youth Counseling Services
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	Yes	Citizens Preparedness Training HyperReach, Social Media and the Sheriff's App

2.3.6 Community Classifications

Table 2-7 summarizes classifications for community programs available to the County of Seneca.

Table 2-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
NWS StormReady Certification	Yes	Seneca County is StormReady	N/A
Firewise Communities classification	No	-	-
NYSDEC Climate Smart Community	No	-	-
Other: Organizations with mitigation focus (advocacy group, non-government)	No	-	-

N/A = Not applicable
 — = Unavailable

2.3.7 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 2022). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. Table 2-8 summarizes the adaptive capacity for each identified hazard of concern and the County’s capability to address related actions using the following classifications:

- Strong: Capacity exists and is in use.



- Moderate: Capacity might exist; but is not used or could use some improvement.
- Weak: Capacity does not exist or could use substantial improvement

Table 2-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam Failure	Moderate
Drought	Moderate
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Landslide	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate

2.4 NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in is responsible for maintaining this information.

2.4.1 NFIP Statistics

Table 2-9 summarizes the NFIP policy and claim statistics for the County of Seneca.

Table 2-9. County of Seneca NFIP Summary of Policy and Claim Statistics

# Policies	100
# Claims (Losses)	111
Total Loss Payments	\$944,854.29
# Repetitive Loss Properties (NFIP definition)	9
# Repetitive Loss Properties (FMA definition)	1
# Severe Repetitive Loss Properties	0
# Policies Within the 1% Annual Chance Flood Boundary	2

NFIP Definition of Repetitive Loss: The NFIP defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period since 1978.

FMA Definition of Repetitive Loss: FEMA’s Flood Mitigation Assistance (FMA) program defines a repetitive loss property as any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

Definition of Severe Repetitive Loss: A residential property covered under an NFIP flood insurance policy and: (a) That has at least four NFIP claim payments over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or (b) For which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building. At least two of the claims must have occurred within any 10-year period, more than 10 days apart.

Source: FEMA 2024



2.4.2 Flood Vulnerability Summary

Table 2-10 provides a summary of the NFIP program in the County of Seneca.

Table 2-10. NFIP Summary

NFIP Topic	Comments
	Floodplain Administration is conducted at the local level.

2.5 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 appreciating a jurisdiction’s overall risk to its hazards of concern. Recent and expected future development trends, including major residential/commercial development and major infrastructure development, are summarized in Table 2-11 through Table 2-13.

Table 2-11. Number of Building Permits for New Construction Issued Since the Previous HMP

Type of Development	2018		2019		2020		2021		2022	
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	Permitting is kept by the County but reported in each applicable municipal annex.									
Multi-Family										
Other (commercial, mixed-use, etc.)										
Total New Construction Permits Issued										

SFHA = Special Flood Hazard Area (1% flood event)

Table 2-12. Recent Major Development and Infrastructure from 2019 to Present

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent and major development is reported in each applicable municipal annex.					

* Only location-specific hazard zones or vulnerabilities identified.



Table 2-13. Known or Anticipated Major Development and Infrastructure in the Next Five Years

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
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Known or anticipated development is reported in each applicable municipal annex.

2.6 JURISDICTIONAL RISK ASSESSMENT

The hazard profiles in Volume I provide detailed information regarding each planning partner’s vulnerability to the identified hazards, including summaries of the County of Seneca’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

2.6.1 Hazard Area

The hazard profiles in Volume 1, Chapter 6 through Chapter 13, provide detailed information regarding each plan participant’s vulnerability to the identified hazards. Chapter 4 (Methodology) and Chapter 14 (Hazard Ranking) provide detailed summaries for the County of Seneca’s risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided in the municipal annexes illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps were generated only for those hazards that can be identified clearly using mapping techniques and technologies and for which the County of Seneca has significant exposure. The maps also show the location of potential new development, where available.

2.6.2 Hazard Event History

The County of Seneca has a history of natural and non-natural hazard events, as detailed in Volume I, Section 5 (Risk Assessment). 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.

provides details regarding County -specific loss and damage the County experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

Table 2-14. Hazard Event History in the County of Seneca

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	County Summary of Damage and Losses
August 13 - 15, 2018	Flood (DR- 4397)	Yes	A slow-moving storm tracked north from New Jersey to northern New York. This system triggered several rounds of heavy rain producing thunderstorms which caused severe flash flooding and major damages in several locations.	The County experienced Road washouts; some resulted in Road closures and overtime for the highway department.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	County Summary of Damage and Losses
January 20, 2020 - May 11, 2023	Pandemic (DR-4480, EM-3434)	Yes	The coronavirus pandemic resulted in roughly 8,000 cases and 100 attributed deaths as of summer 2023.	The County abided by social distancing and work from home guidelines.
January 9, 2024	Windstorm	Yes	Parts of NY experienced high wind events.	Power outages and Trees downed

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

2.6.3 Hazard Ranking and Vulnerabilities

The hazard profiles in Volume I have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following presents key risk assessment results for the County of Seneca.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its own degree of risk to each hazard. The community-specific hazard ranking is based on problems and impacts identified by the risk assessment presented in Volume I. The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; community capabilities to address the hazard; and changing future climate conditions. The County of Seneca reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the County indicated the following:

- The County elected to change the flood ranking from Medium to High because floods have been occurring more frequently and have been increasingly impacting structures in the County.

Table 2-15 shows the County of Seneca’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 2-15. Hazard Ranking Input

Hazard	Rank
Dam Failure	Medium
Drought	Low
Earthquake	Medium
Extreme Temperature	Medium
Flood	High
Landslide	Low
Severe Storm	High
Severe Winter Storm	High

Note: The scale is based on the hazard rankings established in Volume I, modified as appropriate based on review by the jurisdiction



Critical Facilities

Table 2-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 2-16. Critical Facilities Flood Exposure

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Critical facilities are reported in the applicable jurisdictional annexes					

Source: Seneca County GIS 2023, NYS GIS Clearinghouse 2023, NYSDOH 2023, NYSDOT 2023, HIFLD 2023

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in or could impact the County of Seneca:

- Seneca Falls Dam (Town of Seneca Falls)
- Waterloo Dam (Town of Waterloo)

2.6.4 Identified Issues

After a review of the County of Seneca’s hazard event history, hazard rankings, hazard location, and current capabilities, the County of Seneca identified the following vulnerabilities within the community:

- Recent storm events have resulted in severe rainfall which have overwhelmed culverts and caused flooding. It is assumed that some culverts may be undersized and contribute to flooding. There are undersized culverts along CR 136A in Lodi, CR 129 in Romulus at the intersection with Vineyard and Masts, and CR 121 in Fayette.
- Flood prone roads not only interrupt the movement of persons and goods but can lead to isolation issues where first responders are unable to reach their destination and cause evacuation routes to be inaccessible. Flooded road ways may be caused by debris in culverts from severe storms and severe winter storms. There are multiple roads in the County which may benefit from flood mitigation strategies, such as the elevation of the roadways or the hardening of the infrastructure surrounding them to reduce likelihood of flooding including:
 - CR 132A in Romulus
 - State Route 336 from CR 121 to Olschewske Road
 - CR 125 in Fayette
 - CR 125 in Varick
 - CR 137 in Lodi
 - CR124 in Fayette and Varick
 - CR 121 in Fayette
 - CR 139 in Ovid
 - River Road at Kingdom and Bauer
 - West River from 96 to 96A



- Flooding associated with complex multi-jurisdictional issues has been a long-standing problem on the west side of the Town of Waterloo in the Border City/HEP Plaza areas. While the sites are adjacent or in close proximity, they can actually be defined as two separate problems or projects, one being the Border City / 5 & 20 area and the other the HEP Plaza / East Avenue site.
- The County has a number of departments that conduct outreach to socially vulnerable populations and underserved populations. However, it does not partner with many outside agencies to ensure unknown vulnerable populations are identified. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the County through the reduction of long-term risks associated with each hazard of concern. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has nine repetitive loss properties and two severe repetitive loss properties, but other properties may be impacted by flooding as well.
- Seneca Falls Dam is a Class I High Hazard Dam that is located on the eastern end of where Van Cleef Lake meets the Seneca River in the Town of Seneca Falls. The dam is owned by the New York State Canal Corporation. Failure of the dam could result in inundation of densely populated areas, critical facilities and community lifelines, State Route 20, and local roadways including Johnston Street, Seneca Street, and Washington Street. Although the dam was last inspected in 2011, the risk of dam failure warrants an engineering evaluation to determine if retrofits of the dam would result in safer conditions.
- Waterloo Dam is a Class I High Hazard Dam that is located on the Seneca River where it meets the Seneca Canal in the Village of Waterloo. The dam is owned by the New York State Canal Corporation. Failure of the dam could result in inundation of densely populated areas, critical facilities and community lifelines, State Route 96, and local roadways including Locust Street, Huff Street, and Fayette Street. Although the dam was last inspected in 2011, the risk of dam failure warrants an engineering evaluation to determine if retrofits of the dam would result in safer conditions.

2.7 MITIGATION STRATEGY AND PRIORITIZATION

This section discusses the status of mitigation actions from the previous HMP, describes proposed hazard mitigation actions, and prioritizes actions to address over the next five years.

2.7.1 Past Mitigation Action Status

Table 2-17 indicates progress on the County's mitigation strategy identified in the 2019 HMP. Actions that are still recommended but not completed or that are in progress are carried forward and combined with new actions as part of the mitigation strategy for this plan update. Previous actions that are now ongoing programs and capabilities are indicated as such and are presented in the capability assessment earlier in this annex.



Table 2-17. Status of Previous Mitigation Actions

Project Number	Project Name	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
1	CR 127, Varick	County Highway	Problem: Drainage improvements are required on CR 127 in Varick to reduce roadway flooding. Solution: Install drain pipe along CR 127 in Varick.	1. Completed 2. Larger pipes were installed.	1. Discontinue 2. Not applicable 3. Project is complete
2	CR 136A, Lodi	County Highway	Problem: There are undersized culverts and catch basins in Lodi along CR 136A contributing to roadway flooding. Solution: Install larger culvert pipe and catch basin at two sites along CR 136A in Lodi	1. No Progress 2. Other locations were prioritized to be addressed.	1. Include 2. Not applicable 3. Not applicable
3	CR 131 Ovid and Lodi	County Highway	Problem: CR 131 in Ovid and Lodi both experience flood conditions during heavy rains. Solution: Sites along CR131 in Ovid and Lodi must be evaluated for cost-effective measures to reduce the likelihood of flooding.	1. Completed 2. Larger pipes were installed.	1. Discontinue 2. Not applicable 3. Project is complete
4	CR 129, Romulus	County Highway	Problem: Undersized culverts are contributing to flooding conditions on CR 129 in Romulus at its intersections with Vineyard and Masts. Solution: Install larger capacity drain pipes and box culverts on Vineyard and Masts which intersect with CR 129 in Romulus.	1. No Progress 2. Water comes from the fields and fills in ditch which runs over the road. Water subsides within a few hours.	1. Include 2. Not applicable 3. Not applicable
5	CR 153, Ovid	County Highway	Problem: There are three sites along CR 153 near Deerlick Springs Road in Ovid which would benefit from culvert piping replacements, as the current capacity is undersized.	1. Complete 2. New piping was put in. The Town of Ovid also installed piping as well.	1. Discontinue 2. Not applicable 3. New piping was put in. The Town of Ovid also installed piping as well.



Project Number	Project Name	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
			Solution: Work at the identified sites to improve culvert capacity to mitigate the flood risk along CR 153 near Deerlick Springs Road in Ovid.		
6	CR 141A, Covert	County Highway	<p>Problem: Drainage infrastructure is contributing to flooding conditions on CR 141A in Covert at its intersections with Powell and North.</p> <p>Solution: Install heavy steel drainage infrastructure at the intersection of CR 141A and Powell; install gabion baskets at the intersection of CR 141A and North in its box culvert.</p>	<p>1. Complete</p> <p>2. New piping was put in.</p>	<p>1. Discontinue</p> <p>2. Not applicable</p> <p>3. New piping was put in.</p>
7	CR 132A Willard/Romulus	County Highway, State DOT	<p>Problem: Flooding occurs on CR 132A and affects adjoining private properties and the village park. This requires NYS DOT participation since drainage improvements are needed on State Route 96A</p> <p>Solution: Evaluate cost-effective drainage improvements which can be implemented on State Route 94A which would alleviate flooding impacts on CR 132A.</p>	<p>1. No Progress</p> <p>2. Most of the issue is related to a state-owned road. Need NYS DOT cooperation.</p>	<p>1. Include</p> <p>2. Not applicable</p> <p>3. Not applicable</p>
8	State Route 336 from CR 121 to Olschewske Rd	County Highway, State DOT	<p>Problem: On State Route 336, a NYS site, between CR 121 and Olschewske Road experiences flooding conditions due to poor drainage conditions.</p> <p>Solution: Evaluate cost-effective drainage improvements which can be implemented on State Route 336 which would alleviate flooding impacts between CR 121 and Olschewske Road.</p>	<p>1. No Progress</p> <p>2. Most of the issue is related to a state-owned road. Need NYS DOT cooperation.</p>	<p>1. Include</p> <p>2. Not applicable</p> <p>3. Not applicable</p>



Project Number	Project Name	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
9	State Route 96A and private properties in the Village of Interlaken	County Leadership, SWCD, Village of Interlaken	<p>Problem: Hillside runoff from Lively Run stream crosses Route 94A and floods properties along the Route in Interlaken.</p> <p>Solution: Local officials and the Seneca County Soil & Water Conservation District (SWCD) have proposed installing a retention pond that will manage hillside runoff from Lively Run stream that crosses Route 96A and floods properties along 96A in Interlaken.</p>	<p>1. Complete</p> <p>2. The Village put in a larger pipe and the County assisted.</p>	<p>1. Discontinue</p> <p>2. Not applicable</p> <p>3. The Village put in a larger pipe and the County assisted.</p>
10	CR 125, Fayette	County Highway	<p>Problem: Drainage improvements are required at the intersection of Lake Road and Willowdale Lane in Fayette to alleviate flooding conditions.</p> <p>Solution: Evaluate cost-effective drainage improvements, including piping and catch basin, which can be implemented to alleviate flooding impacts at the intersection of Lake Road and Willowdale Lane in Fayette.</p>	<p>1. No Progress</p> <p>2. Have not had recent flooding issues.</p>	<p>1. Include</p> <p>2. Not applicable</p> <p>3. Not applicable</p>
11	CR 125, Varick	County Highway	<p>Problem: Drainage improvements are required at the intersections of Lake Road and Yale Farm Road and Lake Road and Yale Station Road in Varick to alleviate flooding conditions.</p> <p>Solution: Evaluate cost-effective drainage improvements, including piping and catch basin, which can be implemented to alleviate flooding impacts at the intersections of Lake Road and Yale Farm Road and Lake Road and Yale Station Road in Varick.</p>	<p>1. In Progress</p> <p>2. Yale Station has new piping; Yale Farm road has not had new piping and still needs improvements.</p>	<p>1. Include</p> <p>2. Not applicable</p> <p>3. Not applicable</p>



Project Number	Project Name	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
12	CR 137, Lodi	County Highway	<p>Problem: Drainage improvements are required at Wilkins Road in Lodi to alleviate flooding conditions from blockages due to beaver activity.</p> <p>Solution: Evaluate cost-effective drainage improvements, including piping and intersections, which can be implemented to alleviate flooding impacts at Wilkins Road in Lodi from blockages due to beaver activity.</p>	<p>1. In Progress 2. Soil and Water has dredged, but issue of location and logistics. Multiple trucks have gotten stuck in the mud. Cannot get in with vehicles that the County has.</p>	<p>1. Include 2. Not applicable 3. Not applicable</p>
13	CR 124 Fayette & Varick	County Highway	<p>Problem: Drainage improvements are required at the Brown property in Fayette and Varick to alleviate flooding conditions.</p> <p>Solution: Evaluate cost-effective drainage improvements, including pipes and crossings, which can be implemented to alleviate flooding impacts at the Brown property in Fayette and Varick. Institute regularly scheduled cleanings of ditches.</p>	<p>1. In Progress 2. County has ditched it, but it still floods.</p>	<p>1. Include 2. Not applicable 3. Not applicable</p>
14	CR 121, Fayette	County Highway	<p>Problem: An undersized culvert is contributing to flooding conditions on CR 121 in Fayette.</p> <p>Solution: Work at the identified site to improve culvert capacity to mitigate the flood risk on CR 121 in Fayette.</p>	<p>1. In Progress 2. County is currently replacing piping along CR 121. Half are replaced.</p>	<p>1. Include 2. Not applicable 3. Not applicable</p>
15	CR 139, Ovid	County Highway	<p>Problem: CR 139 in Ovid experiences flooding conditions.</p> <p>Solution: Identify cost-effective measures to provide relief to flooding conditions.</p>	<p>1. In Progress 2. Replaced one at Rock River with two large pipes. It still floods.</p>	<p>1. Include 2. Not applicable 3. Not applicable</p>



Project Number	Project Name	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
16	Border City / 5&20 / HEP Area (also in Town of Waterloo projects)	County Supervisors and Department leaders, State Legislators and Agency leaders, Congressional Representative, Supervisor, Highway Superintendent, Town Board, Corporate Executives, SWCD	<p>Problem: Flooding associated with complex multi-jurisdictional issues has been a long-standing problem on the west side of the Town of Waterloo in the Border City/HEP Plaza areas. While the sites are adjacent or in close proximity, they can actually be defined as two separate problems or projects, one being the Border City / 5 & 20 area and the other the HEP Plaza / East Avenue site.</p> <p>Solution: Develop a comprehensive plan that will address the complex issues and challenges associated with flooding in this area. This plan would need to address the following issues:</p> <ul style="list-style-type: none"> • A review and analysis of the maintenance responsibilities of the various public and private property owners that share and contribute to proper management of this drainage area. • Identification of any incentives, funding and/or regulatory actions that could be instituted to encourage better maintenance and improvements to the drainage infrastructure • Perform a technical, engineering and hydrologic analysis that examines problems, solutions and costs for flood mitigation in a comprehensive system-wide approach • Preparation of short-term targets and a long-range comprehensive plan for flood mitigation in the drainage area • Review and implement provisions to manage future development and consider needs to suspend or restrict further growth <p>Look for opportunities to remove flood prone structures from the drainage area or retrofit properties at-risk to flooding</p>	<p>1. In Progress 2. Mostly a State related problem.</p>	<p>1. Include 2. Not applicable 3. Not applicable</p>



2.7.2 Proposed Hazard Mitigation Actions for the HMP Update

The County of Seneca participated in a mitigation action workshop in September 2024 and was provided the following FEMA publications to use as a resource as part of its comprehensive review of all possible activities and mitigation measures to address hazards of concern:

- FEMA 551 “Selecting Appropriate Mitigation Measures for Floodprone Structures” (March 2007)
- FEMA “Mitigation Ideas—A Resource for Reducing Risk to Natural Hazards” (January 2013).

The action worksheets included at the end of this annex list the mitigation actions that the County of Seneca would like to pursue in the future to reduce the effects of hazards. The actions 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 County priorities.

indicates the range of proposed mitigation action categories. The four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Volume I identifies 14 evaluation criteria for prioritizing the mitigation actions. To assist with rating each mitigation action as high, medium, or low priority, a numeric rank is assigned (-1, 0, or 1) for each of the evaluation criteria. provides a summary of the prioritization of all proposed mitigation actions for the HMP update.



Table 2-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	-	-	-	X	-	-	X	-	-	-
Drought	-	-	-	X	-	-	X	-	-	-
Earthquake	-	-	-	X	-	-	X	-	-	-
Extreme Temperature	-	-	-	X	-	-	X	-	-	-
Flood	-	X	X	X	X	X	X	X	X	-
Landslide	-	-	-	X	-	-	X	-	-	-
Severe Storm	-	X	X	X	X	X	X	X	X	-
Severe Winter Storm	-	X	X	X	X	X	X	X	X	-

- 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 structures to reduce the impact of hazards.
- Natural Systems Protection (NSP)*—These are actions that minimize damage and losses and 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
- 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 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 2-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	High / Medium / Low
2025-SenecaCo-01	Culvert Upsizing	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2025-SenecaCo-02	Flood Prone Roadways	1	1	1	1	1	0	0	1	1	1	1	1	1	1	12	High
2025-SenecaCo-03	Border City / 5&20 / HEP Area	1	1	1	1	1	0	0	1	1	1	1	1	1	1	12	High
2025-SenecaCo-04	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	0	1	11	High
2025-SenecaCo-05	Repetitive Loss Property Outreach	1	1	1	1	1	0	0	1	1	1	1	1	1	0	11	High
2025-SenecaCo-06	Seneca Falls Dam Rehab	1	1	1	1	0	0	1	1	1	0	1	1	1	1	11	High
2025-SenecaCo-07	Waterloo Dam Rehab	1	1	1	1	0	0	1	1	1	0	1	1	1	1	11	High

Note: Volume 1, Section 16 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).



Action 2025-SenecaCo-01. Culvert Upsizing

Lead Agency:	Highway Department		
Supporting Agencies:	Jurisdictional Highway Departments		
Hazard(s) of Concern:	<input type="checkbox"/> Dam Failure <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm	
Description of the Problem:	Recent storm events have resulted in severe rainfall which have overwhelmed culverts and caused flooding. It is assumed that some culverts may be undersized and contribute to flooding. There are undersized culverts along CR 136A in Lodi, CR 129 in Romulus at the intersection with Vineyard and Masts, and CR 121 in Fayette.		
Description of the Solution:	The County Engineer will complete an engineering survey of these culverts along County owned roads that are undersized and contribute to flooding to determine the proper size necessary to provide stormwater capacity. The County Highway Department will complete the necessary upsizing for those culverts noted to be undersized.		
Estimated Cost:	TBD after Culvert Study		
Potential Funding Sources:	HMGP, FMA, BRIC, County Budget		
Implementation Timeline:	Within 5 Years		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	Overall flooding will be reduced, which will result in less frequency of road closures and reduced damage occurring to culverts and roadways during severe events. Businesses are likely to remain in place if they are able to remain open, or re-open sooner following a flood.		
Impact on Socially Vulnerable Populations:	Areas that were previously vulnerable to frequency or severe flooding events will be less likely to be impacted by flooding events.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
Impact on Critical Facilities/Lifelines:	<ul style="list-style-type: none"> • Transportation routes are more likely to remain open • Evacuation routes will remain intact. • Access to health and medical facilities will be maintained, both for healthcare workers and the population who requires treatment for injuries and illness. 		
Impact on Capabilities:	Identifying the culverts that are at greatest risk of damage or failure can allow for resource staging to take place where the need is greatest ahead of a flood event.		
Climate Change Considerations:	Climate change is likely to result in more frequent and severe rainfall events. This action upsizes culvert sizes to meet changing stormwater needs as the result of climate change.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input checked="" type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Remove roadway		Roadway cannot be removed
	Raingardens		Raingardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.



Action 2025-SenecaCo-02. Flood Prone Roadways

Lead Agency:	Highway Department		
Supporting Agencies:	NYSDOT, Jurisdictional Highway Departments		
Hazard(s) of Concern:	<input type="checkbox"/> Dam Failure <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm	
Description of the Problem:	<p>Flood prone roads not only interrupt the movement of persons and goods but can lead to isolation issues where first responders are unable to reach their destination and cause evacuation routes to be inaccessible. Flooded road ways may be caused by debris in culverts from severe storms and severe winter storms. There are multiple roads in the County which may benefit from flood mitigation strategies, such as the elevation of the roadways or the hardening of the infrastructure surrounding them to reduce likelihood of flooding including:</p> <ul style="list-style-type: none"> • CR 132A in Romulus • State Route 336 from CR 121 to Olschewske Road • CR 125 in Fayette • CR 125 in Varick • CR 137 in Lodi • CR124 in Fayette and Varick • CR 121 in Fayette • CR 139 in Ovid • River Road at Kingdom and Bauer • West River from 96 to 96A 		
Description of the Solution:	<p>The County will develop specific mitigation solutions for flood-prone road systems after conducting a flood study. Possible solutions may include:</p> <ul style="list-style-type: none"> • Elevation of roadways • Installation or improvement of drainage systems • Regrading of roadway and soils • Resurfacing or reshaping roadways 		
Estimated Cost:	TBD after Road Study		
Potential Funding Sources:	HMGP, BRIC, FMA, County Budget		
Implementation Timeline:	Within 5 Years		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.		
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
Impact on Critical Facilities/Lifelines:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.		
Impact on Capabilities:	N/A		
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input checked="" type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low



Alternatives	Action	Evaluation
	No action	Current problem continues
	Relocate all flood-prone road system	Not feasible
	Raise all flood prone roads	Cost prohibitive



Action 2025-SenecaCo-03. Border City / 5&20 / HEP Area

Lead Agency:	Highway Department	
Supporting Agencies:	Town of Waterloo	
Hazard(s) of Concern:	<input type="checkbox"/> Dam Failure <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm
Description of the Problem:	Flooding associated with complex multi-jurisdictional issues has been a long-standing problem on the west side of the Town of Waterloo in the Border City/HEP Plaza areas. While the sites are adjacent or in close proximity, they can actually be defined as two separate problems or projects, one being the Border City / 5 & 20 area and the other the HEP Plaza / East Avenue site.	
Description of the Solution:	Develop a comprehensive plan after a flood study that will address the complex issues and challenges associated with flooding in this area. This plan would need to address the following issues: <ul style="list-style-type: none"> • A review and analysis of the maintenance responsibilities of the various public and private property owners that share and contribute to proper management of this drainage area. • Identification of any incentives, funding and/or regulatory actions that could be instituted to encourage better maintenance and improvements to the drainage infrastructure • Perform a technical, engineering and hydrologic analysis that examines problems, solutions and costs for flood mitigation in a comprehensive system-wide approach • Preparation of short-term targets and a long-range comprehensive plan for flood mitigation in the drainage area • Review and implement provisions to manage future development and consider needs to suspend or restrict further growth • Look for opportunities to remove flood prone structures from the drainage area or retrofit properties at-risk to flooding 	
Estimated Cost:	TBD after study	
Potential Funding Sources:	HMGP, BRIC, FMA, County Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	This action will identify measures to reduce flooding in the Town of Waterloo.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	
Impact on Critical Facilities/Lifelines:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.	
Impact on Capabilities:	N/A	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.	
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category	<input checked="" type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem continues
	Purchase moveable flood barriers	Does not solve issues
	Elevate flooded area	Not cost effective



Action 2025-SenecaCo-04. Socially Vulnerable Populations Outreach

Lead Agency:	Seneca County Emergency Management		
Supporting Agencies:	Municipality Supervisors		
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam Failure <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm	
Description of the Problem:	<p>The County has a number of departments that conduct outreach to socially vulnerable populations and underserved populations. However, it does not partner with many outside agencies to ensure unknown vulnerable populations are identified. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the County through the reduction of long-risk risks associated with each hazard of concern. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.</p>		
Description of the Solution:	<p>Create outreach materials on hazard risks and mitigation measures for socially vulnerable populations, including dam failure, drought, earthquake, extreme temperature, flood, landslide, severe storm, and severe winter storm. Methods of distribution may include County/municipal events, the County/municipal newsletters, social media, the County/municipal website, and having the materials on display for the public at County/municipal libraries and offices. Consider hiring staff to act as a liaison between outside/partnering agencies and socially vulnerable populations directly. Outreach materials will be specified with education and information for each individual hazard of concern, with measures identified which can assist in reducing long-term risk to the identified hazards of concern.</p>		
Estimated Cost:	Staff Time		
Potential Funding Sources:	County Budget, HMGP		
Implementation Timeline:	Within 3 Years, ongoing after established		
Goals Met:	1, 3, 4, 6		
Benefits:	<p>This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the County. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.</p>		
Impact on Socially Vulnerable Populations:	<p>Socially vulnerable populations in the County will become educated on hazards and risks. The County will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.</p>		
Impact on Future Development:	N/A		
Impact on Critical Facilities/Lifelines:	<p>Educating populations on hazard risk and how to mitigate the risks can decrease the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.</p>		
Impact on Capabilities:	<p>This action would build upon the County's public education and outreach program.</p>		
Climate Change Considerations:	<p>Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action will inform residents and business owners of how to reduce risk from hazards and how climate change may exacerbate those risks.</p>		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem continues
	Rely on state or federal resources		Resources may be generalized and not specific to the risks in the County



Use only a few methods for distribution

Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance



Action 2025-SenecaCo-05. Repetitive Loss Property Mitigation

Lead Agency:	County Emergency Management		
Supporting Agencies:	Highway Department		
Hazard(s) of Concern:	<input type="checkbox"/> Dam Failure <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm	
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has nine repetitive loss properties and two severe repetitive loss properties, but other properties may be impacted by flooding as well.		
Description of the Solution:	The County will help the municipalities to conduct outreach to 30 flood-prone property owners, including RL/SRL property owner and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information, and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
Estimated Cost:	Staff Time		
Potential Funding Sources:	BRIC, FMA, HMGP, Match from property owners		
Implementation Timeline:	Within 5 Years		
Goals Met:	1, 2, 5		
Benefits:	Eliminates flood damage to homes and residences, which creating an open space for the municipality and increasing flood storage.		
Impact on Socially Vulnerable Populations:	Removing homes from the floodplain immediately removes the risk to life and property. Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.		
Impact on Future Development:	Increased outreach to homeowners within a flood prone area will limit construction in areas that are prone to hazard events. Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.		
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact on Capabilities:	Removing the risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of severe rainfall, flash flooding, riverine flooding, and coastal flooding from sea level rise and storm surge events. Removing structures from the floodplain will reduce the response and recovery costs as a result of these events and decrease the loss of human life as a result of these events. Elevating structures will reduce the recovery costs as a result of these events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem continues
	Levee around floodplain		Costly, not enough room
	Deployable flood barriers		Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2025-SenecaCo-06. Seneca Falls Dam Rehab

Lead Agency:	New York State Canal Corporation		
Supporting Agencies:	County Engineer, County EMO, NYDEC, Municipal Engineer		
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam Failure <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm	
Description of the Problem:	Seneca Falls Dam is a Class I High Hazard Dam that is located on the eastern end of where Van Cleef Lake meets the Seneca River in the Town of Seneca Falls. The dam is owned by the New York State Canal Corporation. Failure of the dam could result in inundation of densely populated areas, critical facilities and community lifelines, State Route 20, and local roadways including Johnston Street, Seneca Street, and Washington Street. Although the dam was last inspected in 2011, the risk of dam failure warrants an engineering evaluation to determine if retrofits of the dam would result in safer conditions.		
Description of the Solution:	The Seneca County and Town of Seneca Falls Engineers will work with the New York State Canal Corporation to complete an engineering study of Seneca Falls Dam. The Town will also request information and input from its Highway department and the County regarding impacted roadways. If cost-effective mitigation measures or retrofit options are identified that can increase the level of safety and length of useful life, the Town and the New York State Canal Corporation will pursue funding support, permit approval from NYSDEC, and implement the cost-effective measures.		
Estimated Cost:	High		
Potential Funding Sources:	FEMA BRIC, HHPD		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 2, 7		
Benefits:	This action will improve the safety and security of those who live within the dam inundation areas of the dams and increase the resilience of responding agencies.		
Impact on Socially Vulnerable Populations:	The action will result in better preparedness within the Special Flood Hazard Area and inundation areas where significant risk to socially vulnerable populations exists.		
Impact on Future Development:	Future development located in or near the dam inundation area will be further protected from a dam failure event.		
Impact on Critical Facilities/Lifelines:	Dams are considered a critical facility. This action will create an understanding of the safety procedures in place for each identified dam and strengthen the structural integrity of dam, as needed.		
Impact on Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.		
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events, which may contribute to the likelihood of a dam failure event due to projected increases in precipitation. This action will increase the capabilities to respond to these events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No Action	Current problem continues	
	Decommission Dam	High cost, flood risk for nearby infrastructure increased, loss of Van Cleef Lake and the Seneca River as an environmental, navigational, and hydroelectric resource.	



2. County of Seneca

	Elevate nearby structures	Very high cost and likely not feasible for commercial properties. Will not reduce potential for dam failure due to poor dam conditions
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Action 2025-SenecaCo-07. Waterloo Dam Rehab

Lead Agency:	New York State Canal Corporation	
Supporting Agencies:	County Engineer, County EMO, NYSDEC, Municipal Engineer	
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam Failure <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm
Description of the Problem:	Waterloo Dam is a Class I High Hazard Dam that is located on the Seneca River where it meets the Seneca Canal in the Village of Waterloo. The dam is owned by the New York State Canal Corporation. Failure of the dam could result in inundation of densely populated areas, critical facilities and community lifelines, State Route 96, and local roadways including Locust Street, Huff Street, and Fayette Street. Although the dam was last inspected in 2011, the risk of dam failure warrants an engineering evaluation to determine if retrofits of the dam would result in safer conditions.	
Description of the Solution:	The Seneca County and Village of Waterloo Engineers will work with the New York State Canal Corporation to complete an engineering study of Waterloo Dam. The Village of Waterloo will also request information and input from its Public Works Department and the County Public Works Department regarding impacted roadways. If cost-effective mitigation measures or retrofit options are identified that can increase the level of safety and length of useful life, the Village and the New York State Canal Corporation will pursue funding support, permit approval from NYSDEC, and implement the cost-effective measures.	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HHPD	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 2, 7	
Benefits:	This action will improve the safety and security of those who live within the dam inundation areas of the dams and increase the resilience of responding agencies.	
Impact on Socially Vulnerable Populations:	The action will result in better preparedness within the Special Flood Hazard Area and inundation areas where significant risk to socially vulnerable populations exists.	
Impact on Future Development:	Future development located in or near the dam inundation area will be further protected from a dam failure event.	
Impact on Critical Facilities/Lifelines:	Dams are considered a critical facility. This action will create an understanding of the safety procedures in place for each identified dam and strengthen the structural integrity of dam, as needed.	
Impact on Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.	
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events, which may contribute to the likelihood of a dam failure event due to projected increases in precipitation. This action will increase the capabilities to respond to these events.	
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives:	Action	Evaluation
	No Action	Current problem continues
	Decommission Dam	High cost, flood risk for nearby infrastructure increased, loss of the Seneca River and Canal as an environmental, navigational, and hydroelectric resource.



2. County of Seneca

	Elevate nearby structures	Very high cost and likely not feasible for commercial properties. Will not reduce potential for dam failure due to poor dam conditions
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