



2024 | Hazard Mitigation Plan Broome County, New York

Volume II: Jurisdictional Annexes



December 2024



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Parsippany, NJ 07054



SECTION 8. PLANNING PARTNERSHIP

This section describes the Planning Partnership for the Broome County Hazard Mitigation Plan (HMP) update, participants’ responsibilities throughout the planning process, and the jurisdictional annexes developed from their plan update efforts.

8.1 BACKGROUND

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. In such planning efforts, all participating jurisdictions must meet the requirements of Chapter 44 of the Code of Federal Regulations (44 CFR; Section 201.6a (4)):

- Multi-jurisdictional plans (e.g. watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.

Broome County formed a Planning Partnership for the Broome County HMP update to leverage resources and to meet federal hazard mitigation planning requirements for as many eligible governments as possible. The DMA provides the following definition for a local government:

- 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.

Broome County Office of Emergency Services solicited the participation of all incorporated cities, towns, and villages within the County at the outset of this project. Jurisdictions that expressed interest signed a letter of intent or an authorizing resolution committing their participation and resources to the development of the Broome County HMP update. Table 8-1 lists the jurisdictions that have met the minimum requirements of participation.

Table 8-1. Participating Jurisdictions in Broome County

Municipality			
Broome County	Conklin (T)	Kirkwood (T)	Triangle (T)
Barker (T)	Deposit (V)	Lisle (V)	Union (T)
Binghamton (C)	Dickinson (T)	Maine (T)	Vestal (T)
Binghamton (T)	Endicott (V)	Nanticoke (T)	Whitney Point (V)
Chenango (T)	Fenton (T)	Port Dickinson (V)	Windsor (T)
Colesville (T)	Johnson City (V)	Sanford (T)	Windsor (V)



Each participating planning partner prepared a jurisdictional annex to this plan. These annexes, as well as information on the planning process, are included in this volume of the HMP.

8.2 PLANNING PARTNER RESPONSIBILITIES

As part of the Planning Partnership, the Planning Partners agreed to the following expectations:

- Review 2020 HMP goals and re-establish goals and objectives for the HMP update.
- Establish a timeline for completion of the HMP update.
- Ensure the HMP update meets the requirements of the DMA 2000 and FEMA and NYS DHSES guidance.
- Solicit and encourage the participation of regional agencies, a range of stakeholders, and citizens in the HMP development process.
- Assist in gathering information for inclusion in the HMP, including previously developed reports and data.
- Organize and oversee the public involvement process and support outreach efforts in the community.
- Develop, revise, adopt, and maintain Volume I of the HMP update in its entirety and the local jurisdictional annex in Volume II.

As described in Section 7 (Plan Maintenance), the Planning Partnership is intended to remain active beyond the approval and adoption of the HMP update to support the plan's implementation and maintenance. To ensure continuity of ongoing activities as individual commitments change over time, it will be the responsibility of each jurisdiction and its representatives to inform the HMP Coordinator of any changes in representation.

8.3 JURISDICTIONAL ANNEX PREPARATION PROCESS

As stated in the 2022 New York State Hazard Mitigation Planning Standards, jurisdictional annexes provide a unique, stand-alone guide to mitigation planning for each jurisdiction. The Broome County HMP update is organized so that there is an annex for Broome County and for every jurisdiction within the County's borders. Section 9 (Jurisdictional Annexes) includes an annex for every jurisdiction in Broome County, including those that did not fully participate.

To facilitate an update of the jurisdictional annexes, data from the 2020 Broome County HMP annexes was transferred to a new, updated annex format, developed to meet federal and state criteria. Participants received instructions for doing the following:

- Document changes in capabilities and vulnerabilities.
- Provide a current status of the 2020 HMP mitigation strategy.



- Develop a new mitigation strategy to address identified issues and to increase community resiliency.

8.3.1 Kickoff Meeting and Worksheets

The County invited all municipalities to participate in a kickoff meeting held on July 19, 2023, to provide an overview of the planning process. Subsequently, the contract consultant distributed a suite of worksheets to each planning partner populated with carryover information from the 2020 plan. The worksheets were intended to assist each municipality in updating, integrating, and completing annex input for the 2024 HMP update. During this first round of data gathering, the consultant provided guidance upon request to municipal representatives regarding the input of growth and development trends; planning, legal, fiscal, and regulatory capabilities; education and outreach capabilities; NFIP information and capabilities; areas of integration; and updating the 2020 mitigation strategy.

8.3.2 Hazard Ranking Exercise

On December 7, 2023, the County convened a Planning Partnership meeting to review the relative risk assessment methodology and county-wide results. The meeting informed the municipal points of contact about information that needed to be reviewed, updated, or confirmed by each planning partner. The consultant distributed individualized risk ranking worksheets to facilitate the municipal review and adjusting of the initial results as needed. The consultant supported municipalities by interpreting results if needed and explaining how this exercise supports the development of strong mitigation actions to reduce the impacts of the hazards of concern.

At this meeting, each planning partner was asked to review the risk ranking for its jurisdiction that had been calculated based on the methodology described in Section 4.4. Participants were asked to revise the ranking as necessary based on the history of events, probability of occurrence, and the potential impact on people, property, and the economy. This exercise familiarized the partnership with how to use 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.

8.3.3 Mitigation Strategy Workshop

At a mitigation workshop held on February 1, 2024, the consultant and representatives from FEMA and NYS DHSES discussed the importance of developing strong mitigation actions as well as state requirements for the HMP. The purpose of this workshop was to guide the Planning Partnership in



completing a mitigation strategy and to demonstrate how projects that are well-developed and documented are more quickly identifiable for selection when grants become available.

8.3.4 Municipal Support Meetings

The last round of support meetings, held from February through April 2024, addressed the development of an updated mitigation strategy, confirmation of the risk ranking, and other gaps in information in the draft municipal annexes. The consultant worked one-on-one with municipalities that scheduled individual meetings to complete their jurisdictional annexes. Each section of the annex was discussed to ensure accuracy and completeness. This included but was not limited to the following:

- Reviewing the calculated hazard ranking for the jurisdiction and providing input on how to adjust the ranking as necessary.
- Inspecting the list of critical facilities in the jurisdiction and their exposure to the 1 percent annual chance (100-year) and 0.2 percent annual chance (500-year) flood hazard area. The 2022 New York State Hazard Mitigation Planning Standards require documentation that critical facilities are protected from the 500-year flood event or worst-damage scenario. For those who do not meet this level of protection, the plan must include an action to meet this criterion or explain why it is not feasible to do so. By reviewing the list, the jurisdictions could identify additional mitigation actions related to critical facilities in the municipality.
- Identifying mitigation actions that have reasonable potential to be accomplished within the five-year lifespan of the County HMP, including both FEMA-eligible projects and projects using funds from non-FEMA sources.

8.4 JURISDICTIONAL ANNEX CONTENT

The jurisdictional annexes ensure that each participating jurisdiction achieves and documents local compliance with federal regulations for hazard mitigation planning. Specifically, each annex accomplishes the following:

- Provide a locally relevant synthesis of the overall HMP that can be readily presented, distributed, and maintained.
- Facilitate local understanding of the community's risk to natural hazards.
- Facilitate local understanding of the community's capabilities to manage natural hazard risk, including opportunities to improve those capabilities.
- Facilitate local understanding of the efforts the community has taken, and plans to take, to reduce its natural hazard risk.
- Facilitate the implementation of mitigation strategies, including the development of grant applications.



- Provide a framework by which the community can continue to capture relevant data and information for future HMP updates.

Each jurisdiction's annex is a living document that will continue to be improved as resources permit. The standard format used for the annexes accommodates ongoing efforts to keep each annex current and to improve the effectiveness of the annex as the guiding document by which the jurisdiction will implement hazard mitigation locally. Each annex includes the following sections:

Section 9.X.1—Hazard Mitigation Plan Planning Team: Identifies the hazard mitigation planning primary and alternate contacts, the floodplain administrator, and additional contributors to the plan update.

Section 9.X.2—Municipal Profile: Provides an overview of the jurisdiction, including its size, location, government structure, and demographics.

Section 9.X.3—Capability Assessment and Integration: Provides an evaluation of the jurisdiction's resources available to support hazard mitigation in the following areas:

- Planning, legal, and regulatory capabilities (this portion of the assessment includes a review of how hazard mitigation concepts are integrated into the identified planning mechanisms or can be integrated in the future)
- Development and permitting capabilities
- Administrative and technical capabilities
- Fiscal capabilities
- Education and outreach capabilities
- Participation in state and federal programs designed to promote and incentivize local risk reduction efforts
- Capacity to adapt to changing conditions

Section 9.X.4—National Flood Insurance Program (NFIP) Compliance: Describes local management and regulation of the regulatory floodplain, local measures to implement and enforce the requirements of the NFIP, and statistics on flood policies and claims within the jurisdiction.

Section 9.X.5—Growth and Development Trends: Summarizes recent building permits issued, within or outside of the regulatory floodplain, and identifies areas of known and anticipated future development and infrastructure and the vulnerability of those areas to the hazards of concern.

Section 9.X.6—Jurisdictional Risk Assessment: Provides the following information regarding the jurisdiction's specific vulnerability to the hazards identified for assessment in this HMP:

- **Hazard Area**—Maps showing the boundaries of identified hazard zones, critical facilities, and areas of known or anticipated future development.



- **Hazard Event History**—A list of hazard events that caused significant impacts within the jurisdiction, including a summary of those impacts, based on currently available information. This inventory of events and losses is a work in progress and will continue to be improved as resources permit.
- **Hazard Ranking**—Identification of the jurisdiction’s local degree of risk to each hazard.
- **Critical Facilities Flood Risk**—Identification of potential flood losses to critical facilities in the jurisdiction based on the flood vulnerability assessment process presented in Volume I.
- **Identified Issues**—A list of specific hazard vulnerabilities identified by the jurisdiction.

Section 9.X.7—Mitigation Strategy and Prioritization: Discusses past and proposed hazard mitigation actions as follows:

- **Past Mitigation Action Status**—Reviews the progress of the jurisdiction’s prior mitigation strategy and identifies the disposition of each prior action in the current HMP update.
- **Additional Mitigation Efforts**—Identifies completed or ongoing mitigation activities that were not specifically part of a prior local mitigation strategy.
- **Proposed Hazard Mitigation Actions for the HMP Update**—Presents the following information about the jurisdiction’s updated mitigation strategy:
 - *Mitigation Action Types*—A matrix of the proposed mitigation actions by what hazards each action addresses and what FEMA and CRS action category it falls under
 - *Prioritization of Actions*—A matrix identifying each action’s score for 14 evaluation criteria and final priority (high, medium, or low) based on those scores
 - *Action Worksheets*—Detailed descriptions of each action included in the updated mitigation strategy

8.5 COVERAGE UNDER THE PLAN

Of the planning partners identified during the planning process, including the County, 24 fully met the participation requirements specified by the Steering Committee, including completion of the jurisdictional data collection worksheets, completion of the jurisdictional annex, and participation in workshops or individual support meetings. Table 8-2 lists the status of each jurisdiction. Appendix B (Participation Matrix) and Appendix C (Meeting Documentation) provide details on participation and meeting attendance.



Table 8-2. Jurisdictional Status

Municipality	Letter of Intent to Participate	Attended Workshops and/or Meetings?	Provided Updates on Past Projects	Submitted Mitigation Actions for the Current Plan	Seeking Approval for Adoption (meets requirements)
Barker (T)	X	X	X	X	X
Binghamton (C)	X	X	X	X	X
Binghamton (T)	X	X	X	X	X
Chenango (T)	X	X	X	X	X
Colesville (T)	X	X	X	X	X
Conklin (T)	X	X	X	X	X
Deposit (V)	X	X	X	X	X
Dickinson (T)	X	X	X	X	X
Endicott (V)	X	X	X	X	X
Fenton (T)	X	X	X	X	X
Johnson City (V)	X	X	X	X	X
Kirkwood (T)	X	X	X	X	X
Lisle (T)*					
Lisle (V)	X	X	X	X	X
Maine (T)	X	X	X	X	X
Nanticoke (T)	X	X	X	X	X
Port Dickinson (V)	X	X	X	X	X
Sanford (T)	X	X	X	X	X
Triangle (T)	X	X	X	X	X
Union (T)	X	X	X	X	X
Vestal (T)	X	X	X	X	X
Whitney Point (V)	X	X	X	X	X
Windsor (T)	X	X	X	X	X
Windsor (V)	X	X	X	X	X
Broome County	X	X	X	X	X

*Not participating

Jurisdictions that did not meet all requirements cannot receive FEMA or NYS DHSES approval at the time of plan submittal and are not eligible to obtain FEMA mitigation grant funding. Those jurisdictions can choose to complete their annex and adopt it at a later time, working with Broome County and NYS DHSES to ensure completeness. Any non-participating local government within the Broome County planning area can achieve compliance under this plan in the future by following the linkage procedures defined in Appendix I (Linkage Procedures).



SECTION 9.

9.1 BROOME COUNTY

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the County with reducing losses from future hazard events. This annex is not guidance on 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, describes who participated in the planning process, assesses the County’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.1.1 Hazard Mitigation Planning Team

The County identified primary and alternate HMP points of contact and developed this plan over several months, with input from many departments. The Senior Planners represented the community on the Broome County HMP Planning Partnership and 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.1-1 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 1.

Table 9.1-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Stephanie Brewer, Senior Planner Address: 60 Hawley Street, Binghamton, NY 13901 Phone Number: 607-778-2390 Email: stephanie.brewer@broomecountyny.gov	Name/Title: Aimee Dailey, Senior Planner Address: 60 Hawley Street, Binghamton, NY 13901 Phone Number: 607-778-8000 Email: aimee.dailey@broomecountyny.gov
Additional Contributors	
Name/Title: Beth Lucas, Director of Planning Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Gillian Sloan, Planner Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Marty Haley, Engineer for DPW Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Amy Fassold, Emergency Prep. Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Chet Kupiec, Deputy Commissioner Method of Participation: Provided key input in the planning process	
Name/Title: Cortni Brienza, EM Associate Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Jason Garnar, County Executive	



Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided key input in the planning process	
Name/Title: Joseph Mihalko, County Clerk	
Method of Participation: Provided key input in the planning process	
Name/Title: Joyce Collier, Emergency Manager	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Justin Puglisi, District Manager of Broome County Soil and Water Conservation District	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Katie Pierce, EM Associate	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Kerby Sainclair, Public Safety Coordinator	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Leslie Boulton, Engineering	
Method of Participation: Provided key input in the planning process	
Name/Title: Michael Bender, Public Health Program Coordinator	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Michael Ponticciello, Deputy County Executive	
Method of Participation: Provided key input in the planning process	
Name/Title: Nazar Logvis, Engineer	
Method of Participation: Provided key input in the planning process	
Name/Title: Patrick Dewing, Director of Emergency Services	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Roger Brown, Interim Director of DPW	
Method of Participation: Provided key input in the planning process	
Name/Title: Isabella Paulley, Planner	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Mary McFadden, Director of Broome Health Department	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Brenda Gowe, Director of Broome Parks and Recreation	
Method of Participation: Provided key input in the planning process and attended meetings	

9.1.2 County Profile

Please refer to Section 3 of this HMP for details on Broome County’s population, location, climate, history, growth, and development.

9.1.3 Jurisdictional Capability Assessment and Integration

Broome County 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/or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the County to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.1-2 summarizes the planning and regulatory tools that are available to the County.

Table 9.1-2. Planning, Legal, 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)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Zoning/Land Use Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<i>Consider the following:</i>				
<ul style="list-style-type: none"> • Prior to zoning changes or development permitting, does your jurisdiction review the hazard mitigation plan and other hazard analyses to ensure consistent and compatible land use? • Does the zoning ordinance discourage development or redevelopment within natural areas including wetlands, floodways, and floodplains? • Does it contain natural overlay zones that set conditions? • Does the ordinance require developers to take additional actions to mitigate natural hazard risk? • Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use? 				
Subdivision Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<i>Consider the following:</i>				
<ul style="list-style-type: none"> • Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas? • Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources? • Do the regulations allow density transfers where hazard areas exist? 				
Site Plan Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-



	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)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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>				
<ul style="list-style-type: none"> In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit. 				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Planning Documents				
General/Comprehensive Plan	Yes	Broome County Comprehensive Plan 2013	County	Planning Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>Broome County communities remain strong and resilient in the wake of natural disasters and other challenges through the capacity for cooperation and by incorporating sound planning in all facets of public decision-making. The community will face environmental and economic challenges and needs to be able to rebound and respond. These challenges may arise globally, regionally, or locally. Some of these challenges have already begun to manifest themselves in Broome County. This includes a trend of increasing precipitation resulting in more frequent flooding and at higher levels, the impact of globalization on local economic competitiveness, and the increased demand for senior housing and services brought on by the aging of the local population.</p>				



	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)	Responsible Person, Department, or Agency
Capital Improvement Plan	Yes		County	Department of Public Works
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	Yes	Broome County Stormwater Management Program Plan, March 2018	County	Engineering
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This Stormwater Management Program (SWMP) Plan has been developed to comply with Part IV. A of the New York State Department of Environmental Conservation General Permit for Stormwater Discharges from Municipal Separate Storm Sewers Systems, GP-0-08-002 (and supplemented/revised by GP-0-10-002, and GP-0-15-003), for Broome County, which is classified as a Traditional Non-Land Use Control MS4. The purpose of this SWMPP is to provide policy and management guidance to the regulated Broome County MS4 Departments and facilities to maintain and/or improve water quality. The Broome County MS4 is a member of the Broome-Tioga Stormwater Coalition (BTSC), which exists by way of an inter-municipal agreement between its 15 participating members enacted through municipal resolution by each participating member.				
Open Space Plan	Yes		County	Environmental Management Council
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	Yes		County	Planning Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management 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)	Responsible Person, Department, or Agency
Transportation Plan	Yes	Binghamton Metropolitan Transportation Study: Moving Our Future Forward, October 26, 2020	County	Binghamton Metropolitan Transportation Study
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The plans address not only potential new transportation facilities, but also the need to maintain our existing streets and roads, bridges, and transit systems. They are multimodal, reflecting the complexity of the metropolitan transportation system in which people move by auto, by bus, by bicycle, and on foot; and where goods move by truck, by rail, and by air. It also reflects the close linkage between land use and transportation investment.				
Agriculture Plan	Yes	Broome County Agricultural Economic Development Plan, January 2019	County	Planning Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The residents and businesses of Broome County have long recognized the inherent worth of agriculture as both a profession and a land use that has helped to define their community identity. The purpose of this Agricultural Economic Development Plan is to reiterate their commitment to maintaining a viable agricultural sector and to identify opportunities for county agencies and their local and regional partners to support the growth of farm businesses.				
Climate Action/ Resiliency/Sustainability Plan	Yes	Sustainable Operations Plan & Energy Action Plan, 2024	County	Planning Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This plan incorporates a Broome County GHG Analysis of county-owned properties and an Energy Benchmarking Analysis that assesses and compares the energy performance of buildings against established standards, neighboring buildings, and historical data. The goal was to provide the County with actionable insights into the energy performance of their buildings.				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Broome County Comprehensive Emergency Management Plan	County	Office of Emergency Services
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Broome County Department of Emergency Services provides planning, training, resources, responses, warning, coordination, and information through communications to the public, elected officials, and public safety agencies to assist in preparing for, responding to, and mitigating emergencies and disasters that affect the residents of Broome County. The department maintains the Broome County CEMP, an all-hazard plan that describes how Broome County will organize and respond to emergencies and disasters throughout the county. It is based on and is consistent with, federal, state, and county laws, as well as all other applicable plans and policies, including the National Response Framework and the State of New York CEMP.				



	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)	Responsible Person, Department, or Agency
Continuity of Operations Plan	Yes	Broome County Continuity of Operations/Continuity of Government Plan	County	Office of Emergency Services
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The county has operations that must be performed, or rapidly and efficiently resumed, following an emergency. While the impact of an emergency cannot be predicted, planning for operations under such conditions can mitigate the impact of the emergency on County staff, facilities, and mission. To that end, the county has prepared a COOP/COG Plan. This plan describes how Broome County will sustain the capability to perform its critical functions during and after a disruption in internal operations caused by a hazard impact. The COOP/COG plan references the county’s HMP (2013) and discusses the critical facility exposure to the hazards of concern for the county.</p>				
Substantial Damage Response Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Post-Disaster Recovery Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Public Health Plan	Yes	Broome County Health Assessment and Broome County Community Health Improvement Plan: 2019-2024	County	County Health Department
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Community Health Assessment is a process for examining the health of a community. Importantly, this assessment serves as a baseline for evaluating progress toward the New York State’s Prevention Agenda 2024 goals. These goals are designed to improve the health of all New Yorkers. This assessment also marks our progress toward Healthy People 2020 objectives. While completion of a community health assessment is required of local health departments and hospitals, there are many benefits to doing so.</p> <p>The Community Health Improvement Plan (CHIP) is our plan to make Broome County healthier. Every five years, new priority areas and objectives are chosen from the New York State Prevention Agenda goals and objectives. Then local organizations come up with or start documenting progress on programs that address the issues. A simplified version of the CHIP is on the right.</p>				
Other	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				

Development and Permitting Capability

Table 9.1-3 summarizes the capabilities of the County to oversee and track development.



Table 9.1-3. Development and Permitting Capability

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

Administrative and Technical Capability

Table 9.1-4 summarizes potential staff and personnel resources available to the County and their current responsibilities that contribute to hazard mitigation.

Table 9.1-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	No	-
Zoning Board of Adjustment	No	-
Planning Department	Yes	The Broome County Department of Planning and Economic Development serves to promote the sound and orderly economic and physical growth of Broome County and its constituent municipalities. It provides technical planning guidance and assistance to the County Executive and County Legislature and implements projects and programs designed to improve the economy, environment, and physical infrastructure of the county. The department extends professional services to local municipalities and other public and private entities in the areas of land use planning and zoning, grantsmanship, economic development, cartography, community assistance, research, and infrastructure development.
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	The Broome County Environmental Management Council (EMC) is a citizen advisory group to the County government on local environmental matters. The mission is to provide support and advice to the County Executive, Legislature, municipal bodies, and citizens; conduct environmental research activities; raise public awareness through education; investigate sound methods of ecological planning for the County’s natural resources; review environmental



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		assessments, plans, and reports; and to respond to other environmental concerns as they arise.
Open Space Board/Committee	Yes	Southern Tier Land Conservancy’s (STLC) goals include: <ul style="list-style-type: none"> • Managing and restoring wildlife habitat and biodiversity • Protecting and improving water quality • Supporting and maintaining sustainable heritage practices such as farming, woodland harvesting, hunting, and fishing • Conserving forest and wetland habitats to increase flood resilience. • Providing access to nature close to home for all the residents of the region • Aiding regional climate resilience for our communities through the protection of local resources, open green space, and natural areas
Economic Development Commission/Committee	Yes	The Broome County Department of Planning and Economic Development serves to promote the sound and orderly economic and physical growth of Broome County and its constituent municipalities. It provides technical planning guidance and assistance to the County Executive and County Legislature and implements projects and programs designed to improve the economy, environment, and physical infrastructure of the county. The department extends professional services to local municipalities and other public and private entities in the areas of land use planning and zoning, grantsmanship, economic development, cartography, community assistance, research, and infrastructure development.
Public Works/Highway Department	Yes	Broome County Engineering Division is a principal unit of the Department of Public Works and provides engineering design and project management for repair, renovation, rehabilitation, and replacement projects related to county buildings, bridges, roadways, watersheds, culverts, facilities, and other county infrastructure. The division’s fundamental responsibility is the implementation of projects identified by the County Legislature through the Capital Improvement Program (CIP) in conjunction with projects initiated through individual departmental operating budgets. In addition to the CIP projects, the division is responsible for ongoing monitoring and maintenance projects related to the County’s 108 bridges and 126 large-diameter culverts (those with spans from 5- to 20 feet). The 21 flood control watersheds owned by Broome County are inspected annually by division staff, who also coordinate with other departments to keep these structures in compliance with state and federal regulations. The Engineering Division is tasked with maintaining environmental compliance related to countywide environmental permitting including (1) the county’s MS4



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		stormwater permit program and implementation, and (2) Bulk Petroleum Storage permitting and requirements.
Construction/Building/Code Enforcement Department	Yes	<p>The Buildings and Grounds Division of Public Works provides support services for all departments throughout the Broome County Government.</p> <p>Including:</p> <ul style="list-style-type: none"> • Primary maintenance operations to the Court House Complex, the Fleet Garage, George Harvey Justice Building, Edwin L. Crawford County Office Building, the Public Safety Facility, and the Dog Shelter. • Secondary maintenance operations to the Greater Binghamton Airport (Edwin A. Link Field), Libraries, Arena, Forum, Health, Mental Health, Transit, Social Services, Central Foods, Department of Motor Vehicles, WPNH, and Highway Garage. • Primary maintenance operations of the Governmental Plaza, under the Government Tripartite Agreement.
Emergency Management/Public Safety Department	Yes	The goal of Broome County's Emergency Services and Management Department is to provide planning, training, resources, response, warning, coordination, and information through communications to the public, elected officials, and public safety agencies to assist them in preparing for, responding to and mitigating emergencies and disasters which affect the residents of Broome County.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Broome County manages and regulates its stormwater program through the joint efforts of the Planning Department and DPW-Engineering Division. The County has a Stormwater Management Program (SWMP) Coordinator who is in charge of ensuring the Stormwater Management Plan is followed.
Mutual aid agreements	Yes	The Binghamton Metropolitan Transportation Study is a regional transportation planning agency. Designated under Federal law as a Metropolitan Planning Organization (MPO), BMTS is responsible for developing transportation plans and programs. These plans explore both long-range and near-term needs of the transportation system, and how those needs relate to broader community goals of mobility, quality of life, and economic growth.
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other: Flood Task Force	Yes	The Broome County Planning Department coordinates the Flood Task Force. This group has representatives from local, state, and federal governments, including engineers, Soil and Water Conservation District staff, code officers, and elected officials. The group serves to educate its members on topics related to flooding such as flood map amendments, flood



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		insurance, and mitigation funding programs, as well as advocating for changes in federal and state regulations related to flood policy and hazard mitigation.
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	DPW, Engineering, and Planning
Engineers or professionals trained in building or infrastructure construction practices	Yes	DPW and Engineering
Planners or engineers with an understanding of natural hazards	Yes	DPW, Engineering, Planning
Staff with expertise or training in benefit/cost analysis	Yes	Planning and Engineering
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Planning – GIS knowledge
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	Yes	Both in-house and contracts with consultants
Emergency Manager	Yes	Emergency Services
Grant writer(s)	Yes	Emergency Services, DPW, Engineering, and Planning
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Stormwater Engineer as the Stormwater Management Program Coordinator.

Fiscal Capability

Table 9.1-5 summarizes financial resources available to the County.

Table 9.1-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	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



Education and Outreach Capability

Table 9.1-6 summarizes the education and outreach resources available to the County.

Table 9.1-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	
Personnel skilled or trained in website development	Yes	
Hazard mitigation information available on your website	Yes	The County has a tab on the website for Hazard Mitigation that has the HMPs posted and has mitigation links and resources from the State and Federal levels. The County also has a "Preparing For Disaster" tab that gives advice on how to devise a hazard preparation plan and list.
Social media for hazard mitigation education and outreach	Yes	Each department has a variety of social media, including Facebook, YouTube, and X, which can be used for hazard mitigation education and warnings.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	The County provides access and information to multiple warning systems for hazard events, including: <ul style="list-style-type: none"> • NY-Alert. Sign up to receive free warnings and emergency information via voice message, text message, or email, or download the free "iAlertz" app to receive alerts without signing up for an account. • National Weather Service. Your local National Weather Service office provides up-to-date information about current weather, forecast maps, discussions, bulletins, and storm reports. • NOAA Weather Radio. Get information on the NOAA Weather Radio All Hazards, a nationwide network broadcasting continuous weather information. • Integrated Public Alert & Warning System. This national public Emergency Alert System (EAS) sends warnings via broadcast, cable, satellite, and wireless services to deliver important emergency information. It provides the President with the communications capability to address the American people within 10 minutes during a national emergency. EAS can be used when all other methods of alerting the public are unavailable.
Natural disaster/safety programs in place for schools	Yes	
Organizations that conduct outreach to socially vulnerable populations and underserved populations	Yes	



Outreach Resources	Available? (Yes/No)	Comment:
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	Yes	

Community Classifications

Table 9.1-7 summarizes classifications for community programs available to the County.

Table 9.1-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC, 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 9.1-8 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 9.1-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate



Hazard	Adaptive Capacity - Strong/Moderate/Weak
Severe Winter Storm	Moderate
Wildfire	Moderate

9.1.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.1-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.1-9 summarizes the NFIP statistics for the County.

Table 9.1-9. Broome County NFIP Summary of Policy and Claim Statistics

# Policies	1,611
# Claims (Losses)	2,948
Total Loss Payments	\$119,011,868
# Repetitive Loss Properties (NFIP definition)	485
# Repetitive Loss Properties (FMA definition)	126
# Severe Repetitive Loss Properties	78

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.1-10 provides a summary of the NFIP program in the County.

Table 9.1-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Refer to each municipal annex (Sections 9.2 through 9.24) for flood-prone areas in the County.
Do you maintain a list of properties that have been damaged by flooding?	This is performed at the local level, where applicable.



NFIP Topic	Comments
Do you maintain a list of property owners interested in flood mitigation?	This is performed at the local level, where applicable.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	In 2021, the NYSDEC began the process of engaging a consulting firm to perform a Base Level Engineering (BLE) study for the Upper Susquehanna Basin (including Broome County). There have been no updates since June 2021.
How do you make Substantial Damage determinations?	Typically, Substantial Damage determinations would be made by the local municipality. Broome County works with its code contract to make these determinations for County facilities.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	During extreme events, Broome County Engineering Division dispatch engineers to conduct element-based inspections on all County structures, but particularly at known risk locations such as a scour critical bridge.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	According to County records, there are 505 acquisitions throughout the County, largely funded by the FEMA Buyout program or CDBG-DR. Broome County knows elevations exist throughout the County but does not have records/locations from municipalities.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	<p>Broome County's existing FIRM maps are from the 1970s. In 2010, Preliminary Maps were created by FEMA, but for various reasons, these were not adopted. Broome County is still waiting for the mapping process to be initiated again.</p> <p>Only for Emergency Action Plan (EAP) dam sites. Broome County has 23 of these sites in its jurisdiction.</p>
NFIP Compliance	
What local department is responsible for floodplain management?	<p>Floodplain management is largely handled at the local municipal level. According to the County's Charter & Code, DPW is responsible for drainage, sewage, and water supply at County facilities, and flood protection projects Broome County Planning can provide guidance to municipalities and other departments.</p> <p>Mostly local level. DPW is proactive by conducting hydraulic studies for its bridges and culverts to be adequately designed for a given "year" storm, typically a 50 year.</p>
Are any certified floodplain managers on staff in your jurisdiction?	No, this is at the local level.
Do you have access to resources to determine possible future flooding conditions from climate change?	DPW Engineering conducts hydraulic studies for its structures to account for heavier storm conditions as well as relying on local knowledge for a history of water overtopping roads and poor drainage conditions.



NFIP Topic	Comments
<p>Does your floodplain management staff need any assistance or training to support its floodplain management program?</p> <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	<p>The County organizes and hosts municipal trainings annually for planning and zoning board members. Floodplain management and community resiliency is a topic(s) of interest that the County would like to include in future training.</p>
<p>Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)</p>	<p>Broome County GIS provides floodplain map information on the Parcel Mapper, available to municipalities and the public.</p>
<p>How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?</p>	<p>The County would refer to the local municipality, FEMA, NYSDHSES, and NYSDEC guidance.</p>
<p>What are the barriers to running an effective NFIP program in the community, if any?</p>	<p>NFIP is administered at the local municipal level, so the County does not have any direct role or authority. The regulatory maps are from the 1970s. Staffing capacity to enforce and apply for federal funding resources is probably a challenge for many communities.</p>
<p>Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?</p> <ul style="list-style-type: none"> If so, state the violations. 	<p>No, this is targeted toward local municipalities that are responsible for overseeing and enforcing floodplain management regulations.</p>
<p>When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?</p>	<p>N/A</p>
<p>What is the local law number or municipal code of your flood damage prevention ordinance?</p>	<p>Not applicable. Floodplain management is locally administered, any development within a FEMA-identified Special Flood Hazard Area requires a local floodplain development permit from the municipality with jurisdiction.</p>
<p>What is the date that your flood damage prevention ordinance was last amended?</p>	<p>Not applicable. Floodplain management is locally administered, any development within a FEMA-identified Special Flood Hazard Area requires a local floodplain development permit from the municipality with jurisdiction.</p>
<p>Does your floodplain management program meet or exceed minimum requirements?</p> <ul style="list-style-type: none"> If exceeds, in what ways? 	<p>Not applicable. Floodplain management is locally administered, any development within a FEMA-identified Special Flood Hazard Area requires a local floodplain development permit from the municipality with jurisdiction.</p>
<p>Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?</p>	<p>Through the 239 process, Broome County has an opportunity to review and comment on various projects for inter-municipal impacts. Broome County Planning emphasizes the importance of considering and mitigating flood risk on proposed projects.</p>
<p>Does your community plan to join the CRS program or is your community interested in improving your CRS classification?</p>	<p>Is Broome County eligible? Broome County encourages municipal participation in the NFIP CRS program. We could explore ways the County can provide technical support to municipalities.</p>



9.1.5 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 for County-owned facilities, including major residential/commercial development and major infrastructure development, are summarized in Table 9.1-11. And Table 9.1-12 Building permits for new construction are issued at the local level. Other development is tracked within other jurisdictional annexes.

Table 9.1-11. Recent Major Development and Infrastructure from 2018 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
Dorchester Park Gateway	Recreation	-	78 Prospect St, 13862 5470 Rte. 26, 13862 Town Of Lisle, County Of Broome DPW Project No. Pk-1701		The project will reconstruct the entrance road to the park, add ADA compliant sidewalk to the heavily used central portion of the park, rehabilitate the existing bridge over Page Brook that links the northern and southern portions of the park, and better accommodate pedestrian traffic over this bridge. Design was completed in 2018-2019. Construction was completed during the summer of 2021.
Dorchester Park	Recreation	-	78 Prospect St, 13862 5470 Rte. 26, 13862		Accessible Kayak Launch installed in summer 2022
Old Route 17 Truss Bridge Over Susquehanna River	Public Works	-	County Road 28 – Town Of Windsor, County Of Broome DPW Project No. Br 1702		Work will include cleaning and painting of the steel truss, and several steel truss and deck repairs. Design is complete, the project has been bid, and construction will be completed during the summer of 2020.
Colesville Road Bridge Over Duell Creek	Public Works	-	County Road 52 - Town Of Kirkwood, County Of Broome DPW Project No. Br-1802		The replacement bridge will consist of a new precast concrete three-sided structure with precast wing walls. The structure will have a clear opening of 25 feet and a rise of 6 feet. This structure will carry two 12-foot travel lanes with 8-foot shoulders. Approximately 150 feet of road approach reconstruction at either end of the bridge, will be completed to tie the new structure into the existing highway system. Stream channels on the upstream and downstream sides of the crossing will have heavy stone fill placed along the channel and in front of the wing walls. Design is complete, the project has been bid, and construction will be completed during the summer 2020.



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
Old Route 17 Bridge Over Oquaga Creek	Public Works	-	County Road 28 - Town Of Sanford, County Of Broome DPW Project No. Br-1801		The replacement of this bridge will provide a safe structure, resilient to flooding with pile foundations, provide an increased hydraulic capacity, and feature a low maintenance jointless and galvanized superstructure. Design is complete, the project has been bid, and construction will be completed during the summer of 2020.
Bridge Wearing Surface & Membrane Replacement Maintenance Project	Public Works	-	1. Hyde Street over Castle Creek 2. Pierce Creek Road over Little Snake Creek 3. Ballyhack Road over Ballyhack Creek 4. Loughlin Road over Acre Creek 5. Jennings Creek Road over Big Brook 6. Mill Street over Oquaga Creek 7. Middle Stella Ireland Road over Little Choconut Creek.		This project involves the removal of the bituminous wearing surface, repair of the concrete deck, installation of a waterproofing membrane, and replacement of the bituminous wearing surface on 7 smaller County-owned bridges. Design is complete, the project has been bid, and construction will be completed during the summer of 2020.
Chenango Street Pedestrian Improvements	Public Works	-	County Road 129 - Town Of Chenango, County Of Broome DPW Project No. Hw-1905		Approximately 6,000 linear feet of sidewalk will be reconstructed, curb ramps will be upgraded, bus stop locations will be upgraded, and signage and pavement markings will also be upgraded to current standards. Design will take place during 2019-2020 and construction is anticipated in 2021.
North Sanford Road Bridge Over Oquaga Creek	Public Works	-	County Road # 241 - Town Of Sanford, County Of Broome DPW Project No. Br-1901		This project will replace the bridge at the current location of the existing structure and correct adjacent pavement conditions. Design work will be in progress during 2020, and the project bid in the late fall of 2020. It is anticipated that the construction work will be done during the 2021 construction season.
Old Route 17 Over Hotchkiss Creek	Public Works	-	Cr #28 – Village Of Windsor, County Of Broome DPW Project No. Br-1903		All three parts (concrete top slab, concrete-lined flume, and culvert) of this combined structure will be rehabilitated and/or replaced as part of this project. Project design is underway, and construction is anticipated during the 2022 construction season.
Grippen Park Baseball Field	Recreation	-	607 Grippen Ave. S., 13760 P#156.20-1-71		Spring 2021-Fall 2021: Completed
Nanticoke Creek WS Site	-	-	-		Upgrades to the site to bring up to NYSDEC Dam criteria standards and



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
9C Compliance Upgrades					address other deficiencies. Summer 2022-present
Bagsai Softball Complex Upgrades	Recreation	-	-		Four turf field installations, lighting upgrades, and seating upgrades. Currently under construction.
Grippen Park Improvements	Recreation	-	607 Grippen Ave. S., 13760 P#156.20-1-71		Construction of a Chugnut Trail extension and reconstruction of the playground area, parking, a large building, boat ramp, fire pit, & signage. Work in progress for summer 2023.
Transportation - Vehicle Storage Building	Public Works	-	-		This project entails the installation of two new Vehicle Storage Buildings to provide weather protection for our fleet of smaller buses. July 2021-fall 2021
Sturges St. Park	Recreation	-	P#144.59-3-8		Demolition of structure and creation of a pocket park with a memorial garden

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

Table 9.1-12. 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
Veterans Resource Center		-	Town Of Binghamton, County Of Broome DPW Project No. Bg-1901		Previous plan was to renovate the old clubhouse, but that is no longer feasible. New plan is to construct at another location. Project is on hold currently.
Hooper Road Over Patterson Creek	Bridge	-	Cr 33 – Town Of Union, County Of Broome DPW Project No. Br-1904		Part of the new bridge design will specifically address pedestrian use via upgraded sidewalks, as well as bicycle use via upgraded shoulders. Project design is currently underway; however, construction is not slated at this site until the summer of 2023

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

9.1.6 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’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.



Hazard Event History

Broome County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 4 (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.

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the County.

Hazard Ranking

This section provides the community-specific identification of the primary hazard concerns based on identified problems, impacts, and the results of the risk assessment as presented in Volume 1, Section 4 (Risk Assessment). 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; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with the highest level of concern.

As discussed in Volume 1, Section 4.4 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Refer to Section 4.4 (Hazard Ranking) for countywide rankings of each hazard.

Critical Facilities

Table 9.1-13 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.1-13. Critical Facilities Flood Vulnerability

Name	Type	Vulnerability		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Annual Chance Event	0.2% Annual Chance Event		
County Office Building	County Building	-	X		
Visions Veterans Memorial Arena	County Building	-	X		
BCC	County Building	-	X		
BCC	County Building	-	X		

Source: Broome County 2023, Hazus V6

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



- Brandywine Creek Site 1 Dam
- Broome Corporate Park Pond Dam #2
- Finch Hollow Site 1 Dam
- Finch Hollow Site 2 Dam
- Finch Hollow Site 3C Dam
- Little Choconut Site 1A Dam
- Little Choconut Site 2a Dam
- Little Choconut Site 2b Dam
- Little Choconut Site 2c Dam
- Little Choconut Site 2e Dam
- Nanticoke Creek Site 10 Dam
- Nanticoke Creek Site 13 Dam
- Nanticoke Creek Site 3 Dam
- Nanticoke Creek Site 7a Dam
- Nanticoke Creek Site 8 Dam
- Nanticoke Creek Site 9a Dam
- Nanticoke Creek Site 9c Dam
- Nanticoke Creek Site 9e Dam
- Oquaga Creek State Park Dam
- Palmers Pond Dam
- Patterson Brixius Grey Watershed 1 Dam
- Patterson Brixius Grey Watershed 2 Dam
- Whitney Point Dam

Identified Issues

After review of the County's hazard event history, hazard rankings, hazard location, and current capabilities, Broome County identified the following vulnerabilities within their community:

- The ditches along Trim Street, starting at its intersection with Route 11 and extending two miles eastward, in the Town of Kirkwood, are not functioning properly. This leads to drainage issues, overwash onto roadways, causes culvert and road erosion, and impacts access to homes. This area floods with almost every severe storm and poses a risk to the health and safety of residents in this area. The Kirkwood Fire Department is located just east of the intersection and this critical facility is vulnerable during extreme flooding. The building was valued at \$173,287 in 2018 by the local tax assessor. Closer to the intersection is the home of the Binghamton Elks Club. While this building is not technically a critical facility, it is used by a major civic organization and is valued at \$300,000. Thus, the value of two major structures near the proposed project is roughly half a million dollars. Also, Trim Street carries traffic between a major surface street, Highway 11, and Interstate 86. All



the driveways along this two-mile stretch are susceptible to failure and may cause residents to be unable to access or leave their homes

- Loughlin Road Bridge, in the Town of Kirkwood, is a county-owned and -operated structure that spans Acre Creek. The creek slope beneath the bridge regularly fails after a severe storm, leading to bank failure and reduced creek water quality. Creek overflow leads to flooded roadways and has caused flooding in adjacent homes and businesses. Several bridges connect private property (business and residential) over the creek, which are often clogged with debris and have failed in the most recent flooding.
- Glenwood Road at Glenwood Road Bridge in the Town of Vestal is regularly subject to flash flooding because of its proximity to Choconut Creek and hydraulic restriction at the bridge. Nearby homes and business owners are often restricted when the roadway becomes flooded. Glenwood and other roads are often closed for several days, which affects the ability of emergency personnel to reach nearby residents. County-owned and -operated Glenwood Road bridge over Choconut Creek is situated between Underwood Road and Highway 26. The bridge, a major route serving those who live and work west of Highway 26, is and has been subject to repeated erosion and flood damage. The community considers bridge replacement to be a priority mitigation action.
- The County experiences excessive scour and undermining of bridge/culvert structures due to flooding which is compromising the structural integrity of these structures and puts residents at risk of failing bridges and excessive flooding from failing culverts.
- County agencies have distinct evacuation routes and plans; however, road closure information is not distributed in an intuitive manner. Evacuation/alternate routes are determined at the time of disaster, which puts pressure on everyone to be able to evacuate in a timely fashion once given the proposed evacuation routes. This puts older adults and physically disabled residents at a disadvantage.
- There are 111 bridges and 198 culverts in Broome County. The County completed an inventory for large culverts (48" diameter or larger). However, there is no inventory of the locations or conditions of smaller culverts, which are also susceptible to the impacts of stormwater and flooding and the County is not aware of which of these smaller culverts require improvements.
- The Town does not have enough equipment to enhance recovery capabilities such as mitigating repetitive loss properties that experience physical damage from flood, dam/levee failure, severe storm, or severe winter storm.
- The Nanticoke Creek Watershed lies in the northern part of Broome County. As a result of the dominant agricultural land use, the watershed is stressed from siltation, streamflow alterations, suspended sediment, and nutrient enrichment. The primary source of sediment is streambank erosion, which destabilizes the stream and other parts of the watershed, raising the risk of potential flooding.



- Hydrological Data for Nanticoke Creek is out of date and needs to be updated so that mitigation projects can be most accurate and effective.
- Vestal Road experiences frequent flooding during heavy rain due to insufficient drainage systems. The frequent flooding makes parts of the road impassable, and some buildings also have reduced access.
- Broome County participates as a Climate Smart Community and is in need of recertification in 2024. The County and local municipalities need to take action to reduce greenhouse gas emissions and adapt to a changing climate.
- The County does not have a list compiled of Broome County's critical facilities and their vulnerabilities to dam/levee failure, disease outbreak, drought, earthquake, extreme temperature, flood, invasive and nuisance species, severe storm, severe winter storm, or wildfire.
- The County has a Flood Task Force, however, there is no entity that serves to connect the appropriate agencies and subject matter experts in a discussion of the other experienced hazards of concern, including dam and levee failure, disease outbreak, drought, earthquake, extreme temperature, invasive and nuisance species, severe storm, severe winter storm, and wildfire.
- The County lacks an established, well-advertised network of warming and cooling centers that are easily accessible for socially vulnerable populations.
- The County lacks a consistent communication plan to follow during hazard events and extended power outages. Some populations face challenges accessing services and protecting themselves during hazards, due to limited English proficiency or limited internet access. Depending on the scale of an event or outage, it can be challenging to contact affected residents or provide updates or information on available resources or shelters. This issue can particularly affect people who live in rural areas and those who depend on electronic medical equipment and/or mobility devices. There is also a need to establish designated locations for residents to access county services and information during hazard events.
- Some groups and individuals in the County are more susceptible to food insecurity during and after hazard events.
- In the event a hazard makes their home unsafe to occupy, residents may have to find longer-term housing than typical transitional or temporary housing assistance programs provide. Residents who rent or have limited incomes may face additional constraints, such as affordability, that make it challenging to find a long-term housing situation. This issue was identified in the public survey.
- Broome County needs to investigate innovative strategies to improve the resiliency of the community's natural and built environments and will evaluate how to best reduce risk with mitigation projects.
- The relocation to a shelter during hazard events can affect the physical, mental, and emotional health needs of individuals and families. Some socially vulnerable populations may also need extra physical and mental care.



- The County needs to make better use of the Soil and Water Conservation District's numerous programs and services that relate to hazard mitigation and resilience.
- There are various organizations that work to protect and improve rivers at a regional level, but Broome County lacks a local agency that serves as a riverine steward.
- Of the County's 1,428 critical facilities and lifelines, 401 are in the 0.2-percent annual chance floodplain and are at risk from excessive flooding.
- The County is increasingly facing environmental health issues, such as degradation of air quality, that are exacerbated by climate stressors, such as intensifying extreme heat events and more severe wildfires. These events can disproportionately affect socially vulnerable populations.
- The County regularly experiences invasive species impacts and not all residents and visitors are aware when there is an outbreak.
- The County contains several higher education institutions that conduct research related to hazard mitigation and planning. This research could supplement existing initiatives in the County that lack staffing and resources.
- Broome County collects information on various infrastructure and activities on an annual basis, but in most cases, the information does not include risk or vulnerability measures.
- County residents experience a loss of housing and resources due to natural hazard events.
- There is a complex system of infrastructure and utilities that exist throughout the County. Current records are based on information provided by municipalities and gaps exist in the database.
- There is a Dam that is on County property that is located in the Town of Nanticoke and no studies have been performed by the Town due to the property being owned by the County.

9.1.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.1-14 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 9.1-14. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Broome County-1	Trim Street Culvert Enlargement	Flood, Severe Storm	Broome County Engineer	<p>Problem: The ditches along Trim Street, starting at its intersection with Route 11 and extending 2 miles eastward, in the Town of Kirkwood, are not functioning properly. This leads to drainage issues, overflow onto roadways, causes culvert and road erosion, and impacts access to homes. This area floods with almost every severe storm and poses a risk to the health and safety of residents in this area. The Kirkwood Fire Department is located just east of the intersection and this critical facility is vulnerable during extreme flooding. The building was valued at \$173,287 in 2018 by the local tax assessor. Closer to the intersection is the home of the Binghamton Elks Club. While this building is not technically a critical facility, it is used by a major civic organization and is valued at \$300,000. Thus, the value of two major structures near the proposed project is roughly half a million dollars. Also, Trim Street carries traffic between a major surface street, Highway 11, and Interstate 86. All the driveways along this 2-mile stretch are susceptible to failure and may cause residents to be unable to access or leave their homes.</p> <p>Solution: Widen the ditches to improve stormwater management. Increase the culvert size from 12 inches to 24 inches. Line widened ditches with light or medium stone. This project</p>	<p>1. No Progress 2. Hydraulic analysis needed.</p>	<p>1. Include 2. Revised wording. 3. N/A</p>



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				will pay for itself in the long run by minimizing ditch degradation and culvert washout.		
Broome County-2	Reinforce the Acre Creek Banks under the Loughlin Road Bridge	Flood, Severe Storm	Broome County Engineer	<p>Problem: Loughlin Road Bridge, in the Town of Kirkwood, is a county-owned and -operated structure that spans Acre Creek. The creek slope beneath the bridge regularly fails after a severe storm, leading to bank failure and reduced creek water quality. Creek overflow leads to flooded roadways and has caused flooding in adjacent homes and businesses. Several bridges connect private property (business and residential) over the creek, which are often clogged with debris and have failed in the most recent flooding.</p> <p>Solution: Reinforce 1,500 linear feet of each bank and the stream bottom with stone and rip-rap. One side was reinforced in a hit-or-miss fashion in order to save money because there was not enough in the budget to do the complete job. The road has failed on occasion, requiring frequent emergency repairs. Doing the repairs on both sides and the bottom at one time will protect the entire structure because the job will involve using interlocking materials.</p>	<ol style="list-style-type: none"> 1. No progress 2. Need to continue exploring funding sources to enable the execution of a project. 	<ol style="list-style-type: none"> 1. Include 2. Revised wording. 3. N/A
Broome County-3	Glenwood Road Bridge Replacement	Flood, Severe Storm	Broome County Engineer	<p>Problem: Glenwood Road at Glenwood Road Bridge in the Town of Vestal is regularly subject to flash flooding because of its proximity to Choconut Creek and hydraulic restrictions at the bridge. Nearby homes and business owners are often restricted when the roadway becomes flooded. Glenwood and other roads are often closed for several days, which affects the ability of emergency personnel to reach nearby</p>	<ol style="list-style-type: none"> 1. In Progress 2. Bridge designated by NYSDOT as a scour critical structure. Monitoring required during flood/severe storm events. Right of way acquisitions being purchased for upcoming bridge 	<ol style="list-style-type: none"> 1. Include 2. Revised wording. 3. N/A



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				<p>residents. County-owned and -operated Glenwood Road bridge over Choconut Creek is situated between Underwood Road and Highway 26. The bridge, a major route serving those who live and work west of Highway 26, is and has been subject to repeated erosion and flood damage. The community considers bridge replacement to be a priority mitigation action.</p> <p>Solution: Increase the hydraulic capacity of the bridge by raising the roadway and extending the span. Page four of this worksheet illustrates how traffic would be rerouted while the project is underway.</p>	<p>replacement/reconstruction. Funding applications are being prepared for project completion in the coming years.</p>	
Broome County-4	Identify priority locations for property buyouts: Richards Avenue and Tharp Road area has been identified as one priority	Flood, Severe Storm	Broome County Engineer	<p>Problem: The relocation of Choconut Creek now causes frequent flooding and damage to nearby homes located on Tharp Road and Richards Ave. Park area. The Vestal community is a thriving part of the county and attractive to current and potential residents. Homeowners are frustrated from dealing with repeat flood events but want to remain in the immediate area.</p> <p>Solution: Acquire and demolish 12 of the most affected properties, providing property owners relief from flood impacts while giving them the financial resources to relocate to a safer part of the town.</p>	<p>1. No Progress 2. N/A</p>	<p>1. Discontinue 2. N/A 3. Consolidated with similar actions.</p>
Broome County-5	Flood hazard mitigation alternatives for	Flood	County DPW and Planning	<p>Problem: Best mitigation strategy must be identified for County at-risk properties.</p>	<p>1. No Progress 2. N/A</p>	<p>1. Include 2. Consolidated with new action (2024-BroomeCo-24) 3. N/A</p>



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	at-risk County properties			Solution: Broome County will consider hazard mitigation alternatives for at-risk county properties within the floodplain. This includes the Broome County office building, Veterans Memorial Arena, Broome Community College, and the county-owned/managed parks - Grippen, Otsiningo, Dorchester, and En-Joie. The county will perform property-specific site assessments to identify the best mitigation solution.		
Broome County-6	Undermining of Bridges and Culverts	Floods, Severe Storms, Severe Winter Storms	County DPW and Planning	Problem: Scour and undermining of bridge/culvert structures due to flooding Solution: Develop a program to continue erosion and scour protection/mitigation of structures (bridges and culverts) using native stone material and drilling & pinning prior to flooding events	1. In Progress 2. Notes made on culvert inspection reports during the three-year inspection rotation. Structures are monitored immediately following flooding and severe storm events.	1. Include 2. Revised wording. 3. N/A
Broome County-7	Countywide CRS Assistance to Communities	Flood	County DPW and Engineering	Problem: Not all of the municipalities have the capacity to complete requirements for the CRS program. The county currently does not have the capacity to assist municipalities with completing the necessary requirements to join CRS. Solution: Identify CRS actions that can be completed at the county-wide scale to inform municipal efforts or complete individual CRS actions.	1. Ongoing Capability 2. No progress has been made on this action. There is still limited capacity at the local and county level to assist with the CRS certification process.	1. Discontinue 2. N/A 3. This is an ongoing capability of the County and specific needs can be addressed as they arise.
Broome County-8	Contribute to the USACE Upper	Flood	Planning	Problem: Need to determine the cause of and solutions for regional flood issues are properly addressed.	1. Completed 2. The Upper Susquehanna River Basin, New York	1. Discontinue 2. N/A



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	Susquehanna River Basin Comprehensive Flood Damage Reduction Feasibility Study			Solution: At a regional level, identify the current risk for flooding, propose ways to minimize the impact of flood events, determine impacts from various levels of flooding, and suggest structural and non-structural alternatives that could help minimize damage to life and property.	Comprehensive Flood Damage Reduction Feasibility Study Completion Report was completed in 2020. In 2019, the Broome County Flood Task Force submitted comments on the draft study.	3. Project completed.
Broome County-9	Watershed-based Mitigation Strategy	Flood, Severe Storm	County Planning	Problem: Identify hazard areas throughout the County, prioritize areas for further analysis, and identify watershed-based mitigation solutions. Solution: A watershed study was completed and identified the following next steps: 1) Implement mitigation strategies created in the plan 2) Develop mitigation strategies for additional priority watersheds – Fuller Hollow Creek, Chamberlain Creek, and Brixius Creek	1. No Progress 2. N/A	1. Discontinue 2. N/A 3. This is an ongoing capability of the County and specific needs can be addressed as they arise.
Broome County-10	Stormwater Resources and Sewer Shed Mapping	Flood, Severe Storm	County Planning, Soil and Water Conservation District, Upper Susquehanna Coalition	Problem: Stormwater and water resources data exist independently within each municipal entity. This makes it difficult to do planning involving integrated systems. NYS stormwater regulations also require MS4s to complete sewer shed mapping. Solution: Working with the Broome-Tioga Stormwater Coalition and Flood Task Force, evaluate available mapping data associated with stormwater and water resource infrastructure.	1. Completed 2. The Sewershed Mapping project was completed in 2023. Partners include all municipalities from the Broome Tioga Stormwater Coalition, Broome County Soil & Water, Tioga County Soil & Water, and NYSDEC. Project cost was \$272,000.	1. Discontinue 2. N/A 3. Project completed.



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				Collect existing data and fill in gaps where information is missing.		
Broome County-11	Use modeling to anticipate transportation routes expected to be impacted during flood events	Flood	Flood Task Force; Broome-Tioga Stormwater Coalition; Southern Tier 8 Regional Planning	<p>Problem: Road closure information is not distributed in an intuitive manner. Evacuation/alternate routes determined at the time of disaster, not predetermined. An analysis of how transportation is likely to be impacted during a flood event, including anticipated climate change projections, will allow the county to identify a plan for action, and make it easier to notify the public during an event.</p> <p>Solution: Convene an interagency group to determine the best procedures for road closures and communicating information and develop a web-based mechanism for information dissemination. In addition, the county will use modeling to anticipate transportation routes expected to be impacted during flood events and identify/establish alternate routes. This modeling will look at both the 1% annual flood and the 0.2% annual flood. Including an assessment of the 0.2% annual flood event will allow us to account for the anticipated impacts of climate change (rise in base flood elevation) on road infrastructure. This approach is useful as a first-order screening of potential vulnerabilities to future flood risk to be taken into consideration during planned maintenance and upgrade projects. The county will look at various sources to assist with climate change projections (Northeast Regional Climate Center,</p>	<p>1. No Progress 2. N/A</p>	<p>1. Include 2. Revised wording. 3. N/A</p>



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				<p>NYSERDA, and NYSDEC Climate Smart Communities). Identify alternate routes that are of a high priority due to the presence of essential facilities (i.e. hospitals, shelters). In addition, develop a plan for transition to alternate routes during a hazard event and dissemination of transportation information to the public and municipal agencies.</p>		
Broome County-12	Countywide Culvert Inventory	Flood, Severe Storm	County Planning/ BMTS/ NYSDOT/ OES/Transit	<p>Problem: There are numerous culverts located throughout Broome County; however, there is no formal inventory of the location of the culverts or the condition of the culverts. The county is in need of a culvert inventory to provide a snapshot of local drainage within Broome County and identify the needs of each culvert and the types of improvements they could need.</p> <p>Solution: This inventory will assist with short-term and long-term planning efforts. In order to conduct the inventory, the county will need to collect data in the field and collect detailed information about each culvert. Once data is collected, the county can prioritize the culverts based on their conditions and the type of repairs needed. With this information, the county can seek grant funding or set aside in their county budget (or individual municipal budgets) to repair or replace the culverts.</p>	<p>1. In Progress 2. Broome County Culvert Inventory is completed for large culverts, 48" diameter and larger. There are 198 culverts that are inspected on a three-year schedule. Condition ratings are given based on elements of the structure and use a one to four scale similar to the NYSDOT inspections of bridges. Continuing the action to include smaller culverts that are managed by the Highway Department. Small Culvert inventory in progress.</p>	<p>1. Include 2. Revised wording and strategy description. 3. N/A</p>
Broome County-13	Invasive Species Public Outreach	Invasive Species	County Highway and Engineering	<p>Problem: There are numerous invasive species impacting Broome County. The county currently does not have an education and outreach program related to invasive species found in the</p>	<p>1. Ongoing Capability 2. Broome County and its partners regularly provide educational resources to</p>	<p>1. Discontinue 2. N/A</p>



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				<p>county. Invasive species pose a threat to the native vegetation in the county and can lead to increased severity of hazard events (i.e. dying trees from Emerald Ash Borer are more susceptible to strong winds and taking down power lines).</p> <p>Solution: The county will work with federal and state agencies to disseminate information to municipalities regarding invasive species and how residents can prevent the spread of invasive species.</p>	<p>the community about the threat and impact of invasive species on its webpage and social media. In 2021, the Broome County EMC and Parks Department, along with other community organizations, participated in an invasive species workshop organized by the Sierra Club and hosted at Otsiningo Park to share information about identifying and eliminating harmful invasive species. In 2022, Broome County worked with the Binghamton Metropolitan Transportation Study (BMTS) New York State Department of Agricultural and Markets and CCE Broome to share information about invasive species at one of the stops during the Binghamton Bridge Pedal. CCE Broome works with communities to host regular workshops targeted at educating the public on how to identify various invasive species,</p>	<p>3. This is an ongoing capability of the County and additional activities can be established as needs arise.</p>



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					how to report sightings and mitigation measures.	
Broome County-14	Susquehanna River Regional River Initiative	Flood	Broome County Environmental Management Council/Cornell Cooperative Extension	<p>Problem: There is currently no regional river system between Broome and Tioga County and the Village of Sidney.</p> <p>Solution: This proposed project establishes a regional river system initiative to build resilience. This project is intended to link Broome County, Tioga County, and the Village of Sidney together to comprehensively understand and address flooding issues in the Upper Susquehanna River basin. The intent is to partner and build on the USACE/NYSDEC Upper Susquehanna River Study that is currently underway and create regional resiliency through specific projects as well as outreach and education.</p>	<p>1. Completed</p> <p>2. N/A</p>	<p>1. Discontinue</p> <p>2. N/A</p> <p>3. Project completed in 2020.</p>
Broome County-15	United Way of Broome County Infrastructure Resiliency Broome County	All	Upper Susquehanna Coalition, Soil and Water Conservation District, County Planning	<p>Problem: During Tropical Storm Lee, the 911 system serving Broome County received so many calls that its operators could not handle the volume. United Way contributed staff on a 24-hour basis to assist with call volumes. The United Way's 211 system responded to more than 12,000 flood-related calls. Since the United Way does not have an emergency power generator to rely on in case of power outages, this project would purchase and install an emergency generator at the United Way's facility to keep the 211 system operational.</p> <p>Solution: This proposed project would enhance the United Way's 211 call service by installing a</p>	<p>1. No Progress</p> <p>2. N/A</p>	<p>1. Discontinue</p> <p>2. N/A</p> <p>3. Problem addressed through new action.</p>



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				<p>backup generator for emergency use across a five-county area: Broome County, Tioga County, Chenango County, Delaware County, and Otsego County. During storm events, the 211 system provides critical relief to the 911 system that is needed for emergencies.</p>		
Broome County-16	Targeted Disaster Preparedness Education	All	County Emergency Services, United Way	<p>Problem: Broome County lacks a formal disaster preparedness education campaign which makes it difficult to communicate the importance of preparedness to low-income residents, renters, non-English speaking residents, persons with disabilities, and other identified vulnerable populations.</p> <p>Solution: This project provides a disaster preparedness education campaign for vulnerable populations in the Southern Tier. These groups could include low-income residents, renters, persons for whom English is a second language, persons with disabilities, or other identified vulnerable populations. The project would raise individual preparedness levels for these groups through three training programs: "Preparedness for Individuals and Households", "Preparing Your Pet", and "Preparedness for Businesses". The business training would include planning for continuity of operations after a disaster. Project funds would be used for volunteer recruitment, training, orientation, and program implementation and cover a service area that includes Broome, Chenango, Delaware, and Tioga Counties.</p>	<p>1. Ongoing Capability 2. N/A</p>	<p>1. Discontinue 2. N/A 3. This is an ongoing capability of the County that can be augmented as needs arise.</p>



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Broome County-17	Village of Deposit Drainage Study	Flood, Severe Storm	County Emergency Services and Planning	<p>Problem: Flooding issues in the Village of Deposit - Not enough data/info to design solutions</p> <p>Solution: Conduct a study to determine the causes and solutions of the flooding issues.</p>	<p>1. Completed 2. N/A</p>	<p>1. Discontinue 2. N/A 3. Project completed in 2020.</p>
Broome County-18	Equipment for Highway Department	All	Broome County with support from the Village of Deposit and Delaware County	<p>Problem: Additional equipment would enhance recovery capabilities.</p> <p>Solution: Purchase of additional Gradall Excavator and Mini Excavator</p>	<p>1. No Progress 2. N/A</p>	<p>1. Include 2. Revised wording. 3. N/A</p>
Broome County-19	Flood Control Structures on Nanticoke Creek	Flood	Broome County Highway	<p>Problem: Upgrades have been identified for three County Flood Control Structures on Nanticoke Creek in the Towns of Lisle and Maine.</p> <p>Solution: Nanticoke Site 9A in the Town of Lisle is under design and scheduled for construction in 2019.</p> <p>Nanticoke Creek Site 13 (Town of Maine) – watershed upgrades: Design in 2020 (estimated cost = \$300,000) Construction in 2021 (estimated cost = \$ 1.5 million)</p> <p>Nanticoke Creek Site 9C (Town of Lisle) – watershed upgrades: Design in 2022 (estimated cost = \$300,000) Construction in 2023 (estimated cost = \$ 1.3 million)</p>	<p>1. No Progress 2. N/A</p>	<p>1. Include 2. Revised wording. 3. N/A</p>



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Broome County-20	Brady Hill Road (Binghamton) Culvert	Flood, Severe Storm	Broome County Engineering	<p>Problem: Brady Hill Road Culvert is undersized and floods adjacent church regularly.</p> <p>Solution: Identify the best solution to alleviate the flooding problems on Brady Hill Road in Binghamton. Potential solutions would be upsizing the existing culverts, adding additional culverts, and routine maintenance of the culverts to keep clear of debris.</p>	<p>1. Completed</p> <p>2. Concrete invert repaired, and ditch reinforcement/repairs made. No reported issues of flooding since repairs indicating hydraulic sufficiency.</p>	<p>1. Discontinue</p> <p>2. N/A</p> <p>3. Project completed.</p>
Broome County-21	Evacuation Plans	All	Broome County Engineering and Highway Department	<p>Problem: Evacuation Plans are not predetermined for Broome County Communities</p> <p>Solution: Develop an evacuation plan for Broome County. The plan should outline procedures intended to help manage and coordinate evacuations in the county. This will include different evacuation routes based on different situations, procedures on how to notify people of the evacuation, and the chain of command in issuing an evacuation.</p>	<p>1. No Progress</p> <p>2. N/A</p>	<p>1. Discontinue</p> <p>2. N/A</p> <p>3. N/A</p>
Broome County-22	Backup Power for County Facilities	All	Broome County Emergency Services	<p>Problem: County facilities without backup or old backup – COB old generator; arena no generator</p> <p>Solution: Purchase and install generators at COB (60 Hawley St. Binghamton) and the arena (1 Stuart St, Binghamton). This will allow the facilities to operate during power outages and provide essential services to the county and its residents. These facilities could also serve as emergency shelters and having backup power will allow those facilities to provide shelter services.</p>	<p>1. No Progress</p> <p>2. Broome County Arena lacks funding to the begin process of planning to complete a generator project large enough to power the facility.</p>	<p>1. Discontinue</p> <p>2. N/A</p> <p>3. Limited resources to address this specific problem. Critical facilities are addressed under a new action.</p>



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Broome County-23	Stream Gauge Installation and Outreach and Watershed Monitoring	Flood, Severe Storm	Broome County Arena/ Engineering/ Health/ Planning	<p>Problem: The county is in need of additional stream gauges, and water level monitoring at our watersheds. In addition to stream gauges, there is a need to communicate the technical information in a simpler way.</p> <p>Solution: Assess which locations would be best for additional stream gauges to monitor flash flooding. Nanticoke and Chamberlain are two that have been identified. Also, place flood elevation monitoring at watersheds (high-hazard dam flood control) in order to activate emergency action plans if necessary. Establishing a live dashboard for disaster events on the County website. Integrate live monitoring of features deemed helpful.</p>	<p>1. Completed</p> <p>2. Broome County DPW received a \$45,000 NYS Climate Smart Communities Grant to install remote monitoring devices at 25 flood control features throughout the county to better monitor conditions during storm and flood events that may require emergency notification and evacuation procedures. To date, two sensors have been installed and the remaining sensors are expected to be installed in the spring/summer of 2024.</p>	<p>1. Discontinue</p> <p>2. N/A</p> <p>3. Project completed.</p>
Broome County-24	Hydrological Data for Nanticoke Creek	Flood, Severe Storm	Broome County Information Technology, Broome County Emergency Services, Engineering, Planning, Broome County Soil and Water Conservation District, Cornell	<p>Problem: Hydrological Data for Nanticoke Creek needs to be updated so that mitigation projects can be most accurate and effective.</p> <p>Solution: Conduct a hydrological study on the Nanticoke watershed.</p>	<p>1. No Progress</p> <p>2. N/A</p>	<p>1. Include</p> <p>2. Revised wording.</p> <p>3. N/A</p>



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
			Cooperative Extension			
Broome County-25	Rain Gauges	Severe Storm	Broome County Planning/ Engineering (Contractors)	Problem: Broome County has rain gauges on all of the hilltops but it currently isn't used for disaster mitigation efforts. Solution: Assess ways that this data can be useful and implemented.	1. No Progress 2. N/A	1. Discontinue 2. N/A 3. Replaced with more specific and action-oriented strategies.
Broome County-26	Education and Awareness for the Flood Control Structures	Flood	Broome County Emergency Services/ Planning/ Engineering	Problem: The general public isn't aware of the county-owned flood control structures and the significant flood mitigation services they provide. Solution: Develop educational materials and signage (for those that also have recreational uses) about County flood control structures.	1. Ongoing Capability 2. N/A	1. Discontinue 2. N/A 3. This is an ongoing capability for the County that can be augmented as needs arise.
Broome County-27	Flood Insurance Education Program	Flood	Broome County Engineering/ Planning	Problem: Flood insurance education is needed. There is a lot of confusion about what is required among insurance agents, residents, municipal reps, realtors, banks Solution: Establish training/education opportunities, and develop educational fact sheets, brochures, etc.	1. Ongoing Capability 2. Broome County organizes municipal training throughout the year for local officials; flooding and resiliency can be a focus topic for future training. Broome County is sometimes approached by stakeholders to present issues related to flooding.	1. Discontinue 2. N/A 3. This is an ongoing capability for the County that can be augmented as needs arise.
Broome County-28	Old Vestal Road Drainage Study	Flood, Severe Storm	Broome County Planning	Problem: Stormwater issues on Old Vestal Road. Insufficient drainage due to development in Vestal.	1. No Progress 2. Need to conduct the drainage study.	1. Include 2. Revised wording. 3. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Solution: Study drainage leading to the Old Vestal Road system in order to assess solutions.		
Broome County-29	Vulnerable Population Assessment	All	Broome County Public Works, Town of Vestal	Problem: Disaster impacts on vulnerable populations are not specifically identified. Solution: Conduct an assessment of vulnerable populations impacted by disasters (especially flooding) utilizing existing GIS data. Provide to the local municipalities for policy and planning actions.	1. Completed 2. As part of the 2024 HMP Update, the plan will identify specific locations of vulnerable and disadvantaged communities and target outreach materials to these areas.	1. Discontinue 2. N/A 3. Completed with this plan update.
Broome County-30	Second Street Drainage System Upgrades	Flood, Severe Storm	Broome County Planning	Problem: The closed drainage system in Second Street (Village of Deposit) is undersized with larger diameter pipes draining side streets into a smaller diameter line in Second Street. The furthest downstream portion of this system was replaced and upsized in 2010, however, A +/- 700-ft section of pipe between Dean Street and Church Street was not replaced due to funding availability. Over the past several years the flooding issues in Second Street along this section of roadway have increased, causing sidewalk and roadway icing and closure in the winter, and severe flooding the rest of the year. This section of road is directly in front of the Town of Sanford offices (building value of \$976,800), which is a critical facility vulnerable during flooding events. Also, located on this block are two churches (buildings valued at \$862,900 and \$533,300 respectively), one commercial bank property (building valued at \$550,000), and several single and multifamily residential properties (total buildings valued at	1. Complete 2. Drainage upgrades made and paving completed.	1. Discontinue 2. N/A 3. Project completed.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				<p>\$916,800). Although only the Town offices would be considered critical infrastructure, there is an additional \$ 2.863 million worth of other building infrastructure located within the flood-prone area.</p> <p>Solution: Replace the closed drainage system and structures, and increase the size (capacity) of this system. Design of this mitigation has been completed, pipe size has increased from an 18" diameter pipe to a 36" diameter pipe.</p>		
Broome County-31	Use modeling to anticipate transportation routes expected to be impacted during flood events	All hazards	Broome County Engineer	-	<p>1. No Progress 2. N/A</p>	<p>1. Discontinue 2. N/A 3. Duplicate action consolidated into a single new action.</p>
Broome County-32	Climate Smart Community program	All hazards	Broome County Planning and Engineer	<p>Problem: Broome County and local municipalities need to take action to reduce greenhouse gas emissions and adapt to a changing climate.</p> <p>Solution: Broome County will work towards becoming a climate-smart community. In addition, the county will encourage each municipality to participate. The first step to becoming a Climate Smart Community is outlined online (https://climatesmart.ny.gov/actions-certification/getting-started/). Once registered, the county will be able to review and select</p>	<p>1. Complete 2. Broome County was certified as a bronze-level Climate Smart Community in 2019 and is working towards recertification in 2024. Other CSC municipalities within the county include the City of Binghamton (Bronze certification 2023) and the Village of Johnson City</p>	<p>1. Include 2. Update to ongoing capability and to current initiatives. 3. N/A</p>



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				<p>actions to implement. As they are implemented or completed, the county will upload the required information to the CSC portal and apply for certification. The benefits of becoming a Climate Smart Community include better scores on grant applications for some state funding; state-level recognition for community leadership; robust framework to organize local climate action and highlight priorities; streamlined access to resources, training, tools, and expert guidance; and networking and sharing best practices with peers. Additionally, by implementing identified actions, the county experiences additional benefits including, but not limited to: cost savings through greater efficiency; improved air quality from switching to cleaner energy; conservation of green spaces; and reduction of future flood risk through climate change adaptation strategies.</p>	<p>which is working towards certification.</p>	



Proposed Hazard Mitigation Initiatives for the HMP Update

Broome County participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 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 the County’s priorities.

Table 9.1-15 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. Table 9.1-16 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

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

Hazard	Actions That Address the Hazard, by Action Category										
	FEMA				CRS						
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES	
Dam/Levee Failure	X	X	X	X	X	X	X	X	X	X	X
Disease Outbreak	X	-	X	X	X	-	X	X	-	X	
Drought	X	-	-	X	X	-	X	-	-	X	
Earthquake	X	-	-	X	X	-	X	-	-	X	
Extreme Temperature	X	-	-	X	X	-	X	-	-	X	
Flood	X	X	X	X	X	X	X	X	X	X	
Invasive and Nuisance Species	X	-	X	X	X	-	X	X	-	X	
Severe Storm	X	X	X	X	X	X	X	X	X	X	
Severe Winter Storm	X	X	X	X	X	X	X	X	-	X	
Wildfire	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 stormwater 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 9.1-16. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-Broome County-01	Trim Street Culvert Enlargement	0	1	1	1	1	0	-1	0	0	1	1	1	1	1	8	Medium
Action 2024-Broome County-02	Reinforce the Acre Creek Banks under the Loughlin Road Bridge	1	1	1	1	1	-1	0	1	0	1	1	1	0	1	9	Medium
Action 2024-Broome County-03	Glenwood Road Bridge Replacement	1	1	1	1	1	-1	0	1	0	1	1	1	0	1	9	Medium
Action 2024-Broome County-04	Mitigate Scour/Undermining Bridges and Culverts	1	1	1	1	1	1	0	1	0	1	1	1	0	0	10	Medium
Action 2024-Broome County-05	Countywide Evacuation Routes	1	1	1	1	1	1	0	0	0	1	1	1	1	1	11	High
Action 2024-Broome County-06	Countywide Culvert Inspections and Inventory	0	1	1	1	1	0	1	0	0	1	1	1	0	0	8	Medium
Action 2024-Broome County-07	Highway Department Equipment	0	1	1	0	1	1	0	0	0	1	1	1	0	0	7	Medium
Action 2024-Broome County-08	Flood Control Structures on Nanticoke Creek	1	1	1	1	1	1	1	1	1	1	1	1	0	1	13	High
Action 2024-Broome County-09	Hydrological Data for Nanticoke Creek	0	1	1	1	1	0	0	0	0	1	1	1	0	0	7	Medium
Action 2024-Broome County-10	Old Vestal Road Drainage Study	1	1	1	1	1	1	0	1	0	1	1	1	0	1	11	High



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Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-Broome County-11	Maintain Climate Smart Communities Certification	1	1	1	1	1	1	1	1	1	1	1	1	0	1	13	High
Action 2024-Broome County-12	Comprehensive List of County Facilities and Assets	1	1	1	1	0	1	1	0	0	1	1	1	0	0	9	Medium
Action 2024-Broome County-13	Establish an All-Hazards Task Force	1	1	1	1	0	1	1	0	0	1	1	1	0	1	10	Medium
Action 2024-Broome County-14	Establish Warming and Cooling Centers	1	0	1	1	0	1	1	0	1	1	1	1	1	1	11	High
Action 2024-Broome County-15	County-wide Hazard Communication Plan	1	0	1	1	0	1	1	0	1	1	1	1	0	0	9	Medium
Action 2024-Broome County-16	Addressing Food Insecurity during Hazard Events	1	0	1	1	1	1	1	0	1	0	1	1	0	1	10	Medium
Action 2024-Broome County-17	Long-term and Temporary Housing Needs for Displaced Residents	1	0	1	1	0	1	1	0	1	1	1	1	0	1	10	Medium
Action 2024-Broome County-18	Integrate Hazard Mitigation into the Countywide Resiliency Plan	1	1	1	1	0	1	1	1	0	1	1	1	1	1	12	High
Action 2024-Broome County-19	Addressing Health Needs in Shelters	0	0	1	1	0	1	1	0	1	1	1	1	0	0	8	Medium
Action 2024-Broome County-20	Enhance Partnership with County Soil and Water Conservation District	0	1	1	1	0	1	1	1	0	1	1	1	0	0	9	Medium
Action 2024-Broome County-21	Establish River Stewardship Program	0	0	1	1	0	0	1	1	0	1	1	1	0	1	8	Medium



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Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-Broome County-22	Assessing Critical Facilities in the Floodplain	1	1	1	1	0	1	1	0	0	1	1	1	1	1	11	High
Action 2024-Broome County-23	Environmental Health Emergency Preparedness	1	0	1	0	0	1	1	0	1	1	1	1	1	0	9	Medium
Action 2024-Broome County-24	Tick and Invasive Species Preparedness	1	0	1	1	0	1	1	1	1	1	1	1	1	0	11	High
Action 2024-Broome County-25	Enhance Higher Education Partnerships to Reduce Hazard Vulnerabilities	0	0	1	0	0	1	1	0	0	1	1	1	0	0	6	Low
Action 2024-Broome County-26	Enhance Broome County's Inventory and Data Tools to Address Risk and Resiliency	0	0	1	0	0	1	0	0	1	1	1	1	1	0	7	Medium
Action 2024-Broome County-27	Natural Disaster Social Services Response	1	0	1	1	1	1	0	0	1	1	1	1	1	1	11	High
Action 2024-Broome County-28	Municipal Infrastructure Mapping and Database	1	1	1	0	1	1	0	1	1	0	1	1	0	1	10	Medium
Action 2024-Broome County-29	Nanticoke Dam Inundation	1	1	1	0	0	1	0	0	1	1	1	1	0	1	9	Medium

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



Action 2024-Broome County-01. Trim Street Culvert Enlargement

Action Name:	Action 2024-Broome County-01. Trim Street Culvert Enlargement	
Description of the Problem:	The ditches along Trim Street, starting at its intersection with Route 11 and extending two miles eastward, in the Town of Kirkwood, are not functioning properly. This leads to drainage issues, overflow onto roadways, causes culvert and road erosion, and impacts access to homes. This area floods with almost every severe storm and poses a risk to the health and safety of residents in this area. The Kirkwood Fire Department is located just east of the intersection and this critical facility is vulnerable during extreme flooding. The building was valued at \$173,287 in 2018 by the local tax assessor. Closer to the intersection is the home of the Binghamton Elks Club. While this building is not technically a critical facility, it is used by a major civic organization and is valued at \$300,000. Thus, the value of two major structures near the proposed project is roughly half a million dollars. Also, Trim Street carries traffic between a major surface street, Highway 11, and Interstate 86. All the driveways along this two-mile stretch are susceptible to failure and may cause residents to be unable to access or leave their homes.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	A hydraulic analysis is needed. Widen the ditches to improve stormwater management. Increase the culvert size from 12 inches to 24 inches. Line widened ditches with light or medium stone. This project will pay for itself in the long run by minimizing ditch degradation and culvert washout.	
Lead Agency:	Broome County Engineer	
Supporting Agencies:	Planning Department	
Estimated Cost:	\$250,000	
Potential Funding Sources:	TIP, BRIC, HMGP	
Implementation Timeline:	Two Years	
Goals Met:	1, 5	
Benefits:	Estimated \$400,000 saved by eliminating annual repairs.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	This project would protect the critical facility and ensure fire department will have egress and ingress to respond to fire events.	
Impact of Capabilities:	This project would mitigate potential flood damage, which will strengthen the County's capability to handle increased precipitation.	
Impact on Future Development:	This project would mitigate potential flood damage to new developments in the area.	





Climate Change Considerations:	N/A		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem Persists
	Ongoing annual road repairs		Recurring costly expense; does not reduce flood vulnerability
	Stall retention ponds		Not feasible due to high maintenance and the need for easements



Action 2024-Broome County-02. Reinforce the Acre Creek Banks under the Loughlin Road Bridge

Action Name:	Action 2024-Broome County-02. Reinforce the Acre Creek Banks under the Loughlin Road Bridge		
Description of the Problem:	Loughlin Road Bridge, in the Town of Kirkwood, is a county-owned and -operated structure that spans Acre Creek. The creek slope beneath the bridge regularly fails after a severe storm, leading to bank failure and reduced creek water quality. Creek overflow leads to flooded roadways and has caused flooding in adjacent homes and businesses. Several bridges connect private property (business and residential) over the creek, which are often clogged with debris and have failed in the most recent flooding.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	A hydraulic analysis is needed. Widen the ditches to improve stormwater management. Increase the culvert size from 12 inches to 24 inches. Line widened ditches with light or medium stone. This project will pay for itself in the long run by minimizing ditch degradation and culvert washout. Need to continue to explore funding sources to enable the execution of the project.		
Lead Agency:	Broome County Engineer		
Supporting Agencies:	N/A		
Estimated Cost:	\$1 million		
Potential Funding Sources:	TIP, BRIC, HMGP		
Implementation Timeline:	Two Years		
Goals Met:	1, 5		
Benefits:	Reduce estimated annual repairs that cost \$70,000 per event.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This project would mitigate potential flood damage, which will strengthen the County's capability to handle increased precipitation.		
Impact on Future Development:	This project would mitigate potential flood damage to new developments in the area.		
Climate Change Considerations:	Climate change can lead to an increase in the severity and frequency of precipitation events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No action	Current problem continues
	Repeated bank repair	Short-term solution with recurring costs (~\$70,000/event)
	Buyout affected properties	Loss of tax base and businesses; high cost (> \$1 million)





Action 2024-Broome County-03. Glenwood Road Bridge Replacement

Action Name:	Action 2024-Broome County-03. Glenwood Road Bridge Replacement		
Description of the Problem:	Glenwood Road at Glenwood Road Bridge in the Town of Vestal is regularly subject to flash flooding because of its proximity to Choconut Creek and hydraulic restriction at the bridge. Nearby homes and business owners are often restricted when the roadway becomes flooded. Glenwood and other roads are often closed for several days, which affects the ability of emergency personnel to reach nearby residents. County-owned and -operated Glenwood Road bridge over Choconut Creek is situated between Underwood Road and Highway 26. The bridge, a major route serving those who live and work west of Highway 26, is and has been subject to repeated erosion and flood damage. The community considers bridge replacement to be a priority mitigation action.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Bridge was designated by NYSDOT as a scour critical structure. Monitoring is required during flood/severe storm events. Right-of-way acquisitions are being purchased for upcoming bridge replacement/reconstruction. Funding applications are being prepared for project completion in the coming years.		
Lead Agency:	Broome County Engineer		
Supporting Agencies:	Department of Public Works		
Estimated Cost:	\$1.5 million		
Potential Funding Sources:	FEMA BRIC, HMGP, NYSDOT BridgeNY, TIP		
Implementation Timeline:	Two years		
Goals Met:	1, 5		
Benefits:	Lessen road washouts; reduce the cost of interim road, bridge, and creek repairs; and eliminate the need for road closures and resident evacuations.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	This project would progress egress and ingress for emergency vehicles and evacuations.		
Impact of Capabilities:	This project would mitigate potential flood damage, which will strengthen the County's capability to handle increased precipitation.		
Impact on Future Development:	This project would mitigate potential flood damage to new developments in the area.		
Climate Change Considerations:	Climate change can lead to an increase in the severity and frequency of precipitation events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





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Alternatives	Action	Evaluation
	No action	Current problem continues
	Buy out four nearby properties	Does not address bridge washout issues; high cost (> \$1 million)
	Close Glenwood Road between Underwood Road and County Highway 26	Inconveniences residential, business, and commuter traffic; may negatively affect economic activity; moderate cost (~\$500,000)





Action 2024-Broome County-04. Mitigate Scour/Undermining Bridges and Culverts

Action Name:	Action 2024-Broome County-04. Mitigate Scour/Undermining Bridges and Culverts		
Description of the Problem:	The County experiences excessive scour and undermining of bridge/culvert structures due to flooding which compromises the structural integrity of these structures and puts residents at risk of failing bridges and excessive flooding from failing culverts.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will make notes on culvert inspection reports during a three-year inspection rotation. Structures will be closely monitored immediately following flooding and severe storm events. The County will also develop a program to continue erosion and scour protection/mitigation of structures (bridges and culverts) using native stone material and drilling & pinning prior to flooding events.		
Lead Agency:	County Department of Public Works		
Supporting Agencies:	County Engineer, Department of Engineering		
Estimated Cost:	\$350,000		
Potential Funding Sources:	NYSDOT BridgeNY, FEMA HMGP		
Implementation Timeline:	Within two years		
Goals Met:	1, 5		
Benefits:	Increase integrity of bridges and culverts, reduce flood occurrences in the county		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	This project aims to mitigate potential flood damage or impacts that would render nearby roadways impassable.		
Impact of Capabilities:	This project strengthens the County's transportation capabilities.		
Impact on Future Development:	Future development in the area may experience reduced vulnerability to flood impacts.		
Climate Change Considerations:	Climate change can lead to an increase in the severity and frequency of precipitation events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem continues
	Remove culverts		Not preferred





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	Relocate waterways	Not feasible
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Action 2024-Broome County-05. Countywide Evacuation Routes

Action Name:	Action 2024-Broome County-05. Countywide Evacuation Routes	
Description of the Problem:	County agencies have distinct evacuation routes and plans; however, road closure information is not distributed in an intuitive manner. Evacuation/alternate routes are determined at the time of disaster, which puts pressure on everyone to be able to evacuate in a timely fashion once given the proposed evacuation routes. This puts older adults and physically disabled residents at a disadvantage.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The County will convene an interagency group to determine the best procedures for road closures and communicating information and develop a web-based mechanism for information dissemination. In addition, the County will use modeling to anticipate transportation routes expected to be impacted during flood events and identify/establish alternate routes. This modeling will look at both the 1 percent annual flood and the 0.2 percent annual flood. Including an assessment of the 0.2 percent annual flood event will allow us to account for the anticipated impacts of climate change (rise in base flood elevation) on road infrastructure. This approach is useful as a first-order screening of potential vulnerabilities to future flood risk to be taken into consideration during planned maintenance and upgrade projects. The County will look at various sources to assist with climate change projections (Northeast Regional Climate Center, NYSERDA, and NYSDEC Climate Smart Communities). The County will also identify alternate routes that are of a high priority due to the presence of essential facilities (i.e. hospitals, shelters). In addition, develop a plan for transition to alternate routes during a hazard event and dissemination of transportation information to the public and municipal agencies. Collaborate with public transit agencies and providers in the County.	
Lead Agency:	Emergency Services, Department of Public Transportation	
Supporting Agencies:	County Engineer, Department of Planning, BMTS	
Estimated Cost:	\$75,000	
Potential Funding Sources:	FEMA BRIC, Climate Smart Communities	
Implementation Timeline:	Within two years	
Goals Met:	1, 2, 4, 5	
Benefits:	Document anticipated road closures and alternative routes for use during a disaster and identify necessary road improvements; streamline effective communication during disasters.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	This action aims to better prepare critical transportation corridors for potential flood events.	





Impact of Capabilities:	This project aims to improve transportation and emergency services capabilities within the County.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change can lead to an increase in the severity and frequency of precipitation events.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Current problem persists
	Develop a County-wide evacuation route		Does not incorporate specific agency or service population needs
	Leave evacuation routes up to municipalities		Not as cost-effective as doing a County-wide route that can support all of the municipalities



Action 2024-Broome County-06. Countywide Culvert Inspections and Inventory

Action Name:	Action 2024-Broome County-06. Countywide Culvert Inspections and Inventory		
Description of the Problem:	There are 111 bridges and 198 culverts in Broome County. The County completed an inventory for large culverts (48" diameter or larger). However, there is no inventory of the locations or conditions of smaller culverts, which are also susceptible to the impacts of stormwater and flooding and the County is not aware of which of these smaller culverts require improvements.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will continue its development of a small culvert inventory. This inventory will assist with short-term and long-term planning efforts. To conduct the inventory, the county will need to collect data in the field and collect detailed information about each culvert. Once data is collected, the county can prioritize the culverts based on their conditions and the type of repairs needed. With this information, the county can seek grant funding or set aside funds in their county budget (or individual municipal budgets) to repair or replace the culverts.		
Lead Agency:	County Highway Department		
Supporting Agencies:	County DPW - Engineering Division		
Estimated Cost:	Staff Time		
Potential Funding Sources:	Water Quality Improvement Program; Climate Smart Communities		
Implementation Timeline:	Within three years		
Goals Met:	1, 5		
Benefits:	Creation of one database for use in comprehensive water resource management.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be more vulnerable to flooding.		
Impact on Critical Facilities/Lifelines:	This project could help mitigate potential overflows and flooding onto nearby roadways.		
Impact of Capabilities:	This project strengthens the County's ability to handle increasing precipitation events.		
Impact on Future Development:	This project could reduce potential flood impacts to nearby development.		
Climate Change Considerations:	Climate change can lead to an increase in the severity and frequency of precipitation events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No action	Current problem continues
	Stop creation of culvert inventory	County maintains an incomplete database
	Leave the responsibility of the inventory up to the municipalities	Many culverts may be County owned





Action 2024-Broome County-07. Highway Department Equipment

Action Name:	Action 2024-Broome County-07. Highway Department Equipment		
Description of the Problem:	The Town does not have enough equipment to enhance recovery capabilities such as mitigating repetitive loss properties that experience physical damage from flood, dam/levee failure, severe storm, or severe winter storm.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will purchase an additional Gradall Excavator and Mini Excavator.		
Lead Agency:	Broome County Highway Department		
Supporting Agencies:	N/A		
Estimated Cost:	> \$100,000		
Potential Funding Sources:	State Grants, County Budget		
Implementation Timeline:	Within two years		
Goals Met:	2, 4		
Benefits:	Reduce recovery time for infrastructure repairs following a disaster.		
Mitigation Action Type: <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	This project aims to get critical facilities and lifelines back in service following a disaster.		
Impact of Capabilities:	This project strengthens the recovery capabilities.		
Impact on Future Development:	The acquisition of the equipment will strengthen the protection of new facilities.		
Climate Change Considerations:	Climate change can lead to an increase in severity and frequency of precipitation events which may lead to a need for additional recovery capabilities.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem continues
	Consider a mutual aid or shared services agreement		Not preferred
	Instruct municipalities to obtain equipment		Not cost-effective





Action 2024-Broome County-08. Flood Control Structures on Nanticoke Creek

Action Name:	Action 2024-Broome County-08. Flood Control Structures on Nanticoke Creek	
Description of the Problem:	The Nanticoke Creek Watershed lies in the northern part of Broome County. As a result of the dominant agricultural land use, the watershed is stressed from siltation, streamflow alterations, suspended sediment, and nutrient enrichment. The primary source of sediment is streambank erosion, which destabilizes the stream and other parts of the watershed, raising the risk for potential flooding.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The continuation of rehabilitation of the watershed projects along Nanticoke Creek is needed to maintain the current level of flood damage reduction for public safety, bridges, roads, agricultural and other lands, buildings, structures, infrastructure, and other features. The County will conduct a flood study to determine possible solutions to reduce erosion and flooding within areas of the County. After the flood study is completed, the County will implement the best, and most cost-effective solution. Examples of successful projects include Nanticoke WS Site 9A in the Town of Lisle was completed in 2019 at a cost of \$582,580.58. Nanticoke Creek Site 13 in the Town of Maine is currently in the beginning of the design phase and construction is scheduled for 2026 with an estimated cost of \$1.4 million. Nanticoke Creek Site 9C in the Town of Lisle was completed in 2023 at a cost of \$414,895.	
Lead Agency:	Broome County DPW – Division of Engineering	
Supporting Agencies:	NYSDEC, USDA	
Estimated Cost:	\$1.4 million	
Potential Funding Sources:	Broome County Capital Improvement Plan, Rehabilitation of High Hazard Potential Dams Grant (HHPD)	
Implementation Timeline:	Within three years	
Goals Met:	1, 5	
Benefits:	Enhance and maintain flood control capacity	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	Critical facilities located along Nanticoke Creek will experience reduced flooding after the mitigation.	
Impact of Capabilities:	This project will lead to a reduction in flood properties along the creek, which enhances the County's flood reduction capabilities.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change can lead to an increase in severity and frequency of precipitation events which may lead to a need for additional recovery capabilities.	





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Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No action	Current problem continues	
	Elevate roadways	Not feasible	
	Purchase flood walls	Not cost-effective	





Action 2024-Broome County-09. Hydrological Data for Nanticoke Creek

Action Name:	Action 2024-Broome County-08. Hydrological Data for Nanticoke Creek		
Description of the Problem:	Hydrological Data for Nanticoke Creek is out of date and needs to be updated so that mitigation projects can be most accurate and effective.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will conduct a hydrological study on the Nanticoke watershed and will distribute the results to all municipalities affected by the Nanticoke Creek so that grant applications can be submitted for problem areas.		
Lead Agency:	County Department of Planning, County Department of Public Works - Engineering		
Supporting Agencies:	Contractors		
Estimated Cost:	\$75,000		
Potential Funding Sources:	USGS Water Resources Research Act Program, FEMA BRIC		
Implementation Timeline:	Within two years		
Goals Met:	1, 5		
Benefits:	Identify flood mitigation projects to reduce flooding		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	This project could help critical facilities located around Nanticoke Creek with potential mitigation projects to apply for funding.		
Impact of Capabilities:	This project enhances the County's hydrological data.		
Impact on Future Development:	This project will give the County a better idea of where vulnerable areas are located near the Creek.		
Climate Change Considerations:	This project could incorporate future conditions into hydrological models to incorporate these findings in the engineering and design of future mitigation projects.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem continues
	Use best estimates regarding future flood impacts due to climate change		Not cost-effective
	Conduct separate municipal studies		Not cost-effective





Action 2024-Broome County-10. Old Vestal Road Drainage Study

Action Name:	Action 2024-Broome County-10. Old Vestal Road Drainage Study	
Description of the Problem:	Vestal Road experiences frequent flooding during heavy rain due to insufficient drainage systems. The frequent flooding makes parts of the road impassable, and some buildings also have reduced access.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The County will complete a Stormwater Management and Flood Mitigation Analysis that studies the current and future stormwater/flood conditions in the corridor and evaluates possible blue, green, and traditional grey infrastructure improvements to increase resiliency in the corridor	
Lead Agency:	Broome County Public Works, Town of Vestal	
Supporting Agencies:	Broome County Department of Planning, NYSDOT	
Estimated Cost:	\$150,000	
Potential Funding Sources:	FEMA BRIC and HMGP	
Implementation Timeline:	Within three years	
Goals Met:	1, 5	
Benefits:	Projects and costs identified for implementation to improve drainage.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	Some critical facilities and lifelines may be heavily impacted by flooding along Vestal Road.	
Impact of Capabilities:	This project will strengthen the County’s knowledge of flooding issues.	
Impact on Future Development:	This project will help to reduce flooding issues so that additional development can commence.	
Climate Change Considerations:	Climate change can lead to an increase in severity and frequency of precipitation events which may lead to a need for additional recovery capabilities.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem continues
	Elevate road	Not preferred
	Purchase moveable flood barriers	Not cost-effective





Action 2024-Broome County-11. Maintain Climate Smart Communities Certification

Action Name:	Action 2024-Broome County-11. Maintain Climate Smart Communities Certification		
Description of the Problem:	Broome County participates as a Climate Smart Community and is in need of recertification in 2024. The County and local municipalities need to take action to reduce greenhouse gas emissions and adapt to a changing climate.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	Broome County was certified as a bronze-level Climate Smart Community in 2019 and is working towards recertification in 2024. Other CSC municipalities within the county include the City of Binghamton (Bronze certification 2023) and the Village of Johnson City which is working towards certification. The County and municipalities will work toward recertification by creating plans and projects that address dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperatures, flooding, invasive and nuisance species, severe storms, severe winter storms, and wildfires. Some of these projects include integration of the identified hazards of concern into other plans and ordinances to better protect and prepare the County from these hazards, as well as interactive hazard maps to help better educate the public.		
Lead Agency:	County Department of Planning		
Supporting Agencies:	Participating municipalities		
Estimated Cost:	Staff Time		
Potential Funding Sources:	County Operating Budget		
Implementation Timeline:	On-going capability		
Goals Met:	1, 2, 5, 6		
Benefits:	This project creates a greater climate resilience in the County.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This project improves the County’s participation as a Climate Smart Community.		
Impact on Future Development:	N/A		
Climate Change Considerations:	This project aims to both mitigate the impacts of climate change and better prepare the County and its municipalities for future conditions.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No action	Current problem persists
	County implemented climate mitigation and adaptation actions voluntarily	Lack of coordination between initiatives and future strategies





Action 2024-Broome County-12. Comprehensive List of County Facilities and Assets

Action Name:	Action 2024-Broome County-12. Comprehensive List of County Facilities and Assets		
Description of the Problem:	The County does not have a list compiled of Broome County’s critical facilities and their vulnerabilities to dam/levee failure, disease outbreak, drought, earthquake, extreme temperature, flood, invasive and nuisance species, severe storm, severe winter storm, or wildfire.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Broome County Sustainable Operations Plan will establish a list of county facilities and includes information related to location, size, populations served, vulnerability to dam and levee failure, disease outbreak, drought, earthquake, extreme temperature, flood, invasive and nuisance species, severe storm, severe winter storm, and wildfire. Once the list is completed, Policies will be developed to ensure that the list is regularly maintained as new facilities come online and others are consolidated or removed. This list will provide a quick guide on which facilities need to be monitored or modified, depending on a potential incoming hazard, such as building elevation, fireproofing, backup access to utilities, etc.		
Lead Agency:	County Department of Planning, County Department of Public Works		
Supporting Agencies:	Facility managers		
Estimated Cost:	Staff time		
Potential Funding Sources:	County Operating Budget		
Implementation Timeline:	Within one year		
Goals Met:	1, 5		
Benefits:	County will have a continuously updated list of facilities to assess for potential improvements.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Some socially vulnerable populations are very reliant on critical facilities for extra support and assistance.		
Impact on Critical Facilities/Lifelines:	This action addresses critical facilities.		
Impact of Capabilities:	This strengthens the County’s building inventory list which strengthens their ability to identify potential vulnerabilities.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in the intensity and frequency of precipitation events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No action	Current problem persists
	Identify assets requiring mitigations as funding becomes available	Not preferred; not cost-effective
	Leave responsibility up to the municipalities	The County has facilities owned by most municipalities and most municipalities do not have the staffing capability to compile a list





Action 2024-Broome County-13. Establish an All-Hazards Task Force

Action Name:	Action 2024-Broome County-13. Establish an All-Hazards Task Force		
Description of the Problem:	The County has a Flood Task Force, however, there is no entity that serves to connect the appropriate agencies and subject matter experts in a discussion of the other experienced hazards of concern, including dam and levee failure, disease outbreak, drought, earthquake, extreme temperature, invasive and nuisance species, severe storm, severe winter storm, and wildfire.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The County will consider expanding the existing Flood task force to include other hazards of concern and will include other subject matter experts that speak to dam and levee failure, disease outbreak, drought, earthquake, extreme temperature, invasive and nuisance species, severe storm, severe winter storm, and wildfire. This task force will serve as a support system from the County to also help municipalities that may be experiencing a specific vulnerability.		
Lead Agency:	County Department of Planning		
Supporting Agencies:	Flood Task Force		
Estimated Cost:	Staff Time		
Potential Funding Sources:	County Operating Budget		
Implementation Timeline:	Within two years		
Goals Met:	2		
Benefits:	The Task Force will take a more comprehensive approach to mitigating the County and its assets from potential hazard impacts.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	This task force would serve to protect critical facilities from the hazards of concern.		
Impact of Capabilities:	This task force would enhance the County's capability to handle hazard events.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change may enhance flooding, as well as the frequency and intensity of storm events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem persists





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	Create separate All-Hazards Task Force	Possible duplication of efforts
	Instruct municipalities to create a hazard task force	Not cost-effective





Action 2024-Broome County-14. Establish Warming and Cooling Centers

Action Name:	Establish Warming and Cooling Centers		
Description of the Problem:	The County lacks an established, well-advertised network of warming and cooling centers that are easily accessible for socially vulnerable populations.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Codify and promote the use of Broome County Public Transportation buses, senior centers, and other public facilities as warming and cooling stations during extreme temperature events and advertise the service to socially vulnerable populations.		
Lead Agency:	County Emergency Services,		
Supporting Agencies:	County Health Department, Broome County Department of Public Transportation		
Estimated Cost:	Staff Time		
Potential Funding Sources:	County Operating Budget		
Implementation Timeline:	Within three years		
Goals Met:	2, 4		
Benefits:	The County can leverage existing assets to develop an established, well-advertised network of warming and cooling centers proximate to those populations who need them the most. During times of emergencies, the focus can be on opening these designated shelters rather than having to determine where to put them.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This project will make warming and cooling centers more easily accessible for individuals seeking shelter.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action strengthens the protection of socially vulnerable populations.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in extreme temperature events that may require heating and cooling shelters to be open.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem persists
	Construct new warming and cooling shelters		Not cost-effective
	Leave the responsibilities up to the municipalities		Not cost effective





Action 2024-Broome County-15. County-Wide Hazard Communication Plan

Action Name:	Action 2024-Broome County-15. County-Wide Hazard Communication Plan	
Description of the Problem:	The County lacks a consistent communication plan to follow during hazard events and extended power outages. Some populations face challenges accessing services and protecting themselves during hazards, due to limited English proficiency or limited internet access. Depending on the scale of an event or outage, it can be challenging to contact affected residents or provide updates or information on available resources or shelters. This issue can particularly affect people who live in rural areas and those who depend on electronic medical equipment and/or mobility devices. There is also a need to establish designated locations for residents to access county services and information during hazard events.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The County will develop a unified communication plan to implement during hazard events for County services, including departments that handle transit, parks, library services, social services, and aging populations, among others. The County will translate materials into relevant languages for limited English-speaking populations and ensure materials are distributed at physical locations, such as libraries and community centers, to reach individuals with limited technology or internet access. The County will also ensure the plan enables the sharing of situational updates related to the nature/scale of the outage and anticipated time of restoration with other agencies and will use this strategy to examine existing grid capacity and power outage issues, particularly in rural areas with poor internet services (i.e., Windsor and Harpursville). The County will also conduct outreach to private utility owners to involve them in the strategy and consider mitigation improvements (i.e., NYSEG in Whitney Point).	
Lead Agency:	County Emergency Services	
Supporting Agencies:	County Public Transportation, Parks Department, Department of Planning, Department of Social Services, Office for the Aging, Veteran Service Agency, Broome County Public Library	
Estimated Cost:	Staff Time	
Potential Funding Sources:	County Operating Budget	
Implementation Timeline:	Within two years	
Goals Met:	2, 4	
Benefits:	This action would create efficiencies and ensure consistency between agency communications and actions during hazard events.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This project may benefit socially vulnerable populations that speak limited English and/or depend on critical County services, such as those provided by the departments of transit, social services, and aging, among others.	
Impact on Critical Facilities/Lifelines:	This project includes agencies that handle critical facilities and lifelines, such as Public Transportation.	





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Impact of Capabilities:	This capability strengthens the County’s ability to communicate with all services and municipalities.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change can lead to an increase in severity and frequency of precipitation events which may lead to a need for additional recovery capabilities.	
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
Alternatives	Action	Evaluation
	No action	Current problem persists
	Develop a municipality communication plan	Not cost-effective
	Develop a single County-wide communication plan during hazards	No consideration of individual department needs and service populations





Action 2024-Broome County-16. Addressing Food Insecurity during Hazard Events

Action Name:	Action 2024-Broome County-16. Addressing Food Insecurity during Hazard Events		
Description of the Problem:	Some groups and individuals in the County are more susceptible to food insecurity during and after hazard events.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The County will promote and ensure access to food assistance programs and services during and after hazard events. The County will also work with food pantry organizations to identify necessary resources to meet increased demands during hazard events.		
Lead Agency:	County Department of Social Services		
Supporting Agencies:	Office for the Aging, Department of Health, Emergency Services, Community Hunger Outreach Warehouse (CHOW), Food Bank of the Southern Tier		
Estimated Cost:	Staff Time		
Potential Funding Sources:	County Operating Budget		
Implementation Timeline:	Within two years		
Goals Met:	4		
Benefits:	This project will streamline efforts to support households experiencing food insecurity due to flooding.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This project aims to support individuals who are more likely to be affected by food insecurity, which includes lower-income households, such as those on fixed incomes, those unable to work, or those living below the poverty threshold.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This project aims to help socially vulnerable populations maintain access to food during and after hazard events.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change may lead to an increase in the severity and frequency of precipitation events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem persists
	Provide cash assistance to households		Not preferred
	Leave responsibility of food insecurity up to the municipalities		Not cost-effective





Action 2024-Broome County-17. Long-term and Temporary Housing Needs for Displaced Residents

Action Name:	Action 2024-Broome County-17. Long-term and Temporary Housing Needs for Displaced Residents	
Description of the Problem:	In the event a hazard makes their home unsafe to occupy, residents may have to find longer-term housing than typical transitional or temporary housing assistance programs provide. Residents who rent or have limited incomes may face additional constraints, such as affordability, that make it challenging to find a long-term housing situation. This issue was identified in the public survey.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	County Emergency Services will lead the development of a unified and coordinated procedures document to minimize duplication of efforts and leverage existing programs and initiatives. The procedures will apply to the County Emergency Services, as well as the Departments of Social Services and Health, and the Office for the Aging.	
Lead Agency:	County Emergency Services	
Supporting Agencies:	County Department of Social Services, Department of Health, Office for the Aging	
Estimated Cost:	Staff Time	
Potential Funding Sources:	County Operating Budget	
Implementation Timeline:	Within five years	
Goals Met:	4	
Benefits:	This project will maximize existing resources and programs provided across multiple departments.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This activity will support individuals more vulnerable to facing housing insecurity, such as those with limited incomes or who rent their homes.	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	This action strengthens the County Emergency Services to ensure safe living is accessible.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of storm events that may negatively impact the structural integrity of the home.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem persists





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	Consolidate all housing assistance programs under one department	Not cost-effective
	Leave responsibility up to the municipality	Not cost-effective





Action 2024-Broome County-18. Integrate Hazard Mitigation into the Countywide Resiliency Plan

Action Name:	Integrate Hazard Mitigation into the Countywide Resiliency Plan		
Description of the Problem:	Broome County needs to investigate innovative strategies to improve the resiliency of the community's natural and built environments and will evaluate how to best reduce risk with mitigation projects.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Broome County Department of Planning will develop a Countywide Resiliency plan that builds upon the planning work that has already been done, fill information and data gaps necessary for the implementation of resiliency projects and programming, and integrate projections of future hazard impacts.		
Lead Agency:	Broome County Planning Department		
Supporting Agencies:	Broome County DPW, Soil and Water Conservation District		
Estimated Cost:	\$300,000		
Potential Funding Sources:	County Operating Budget, NYS Smart Growth Countywide Resiliency Program		
Implementation Timeline:	Within three years		
Goals Met:	5, 6		
Benefits:	This activity would leverage existing resources and initiatives to implement mitigation projects.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	A Countywide Resiliency Plan can address concerns that socially vulnerable populations may have in relation to hazard events.		
Impact on Critical Facilities/Lifelines:	This project could result in improvements to critical facilities and lifelines, depending on the projects included in the final plan.		
Impact of Capabilities:	This action strengthens the County's resiliency to hazard events.		
Impact on Future Development:	N/A		
Climate Change Considerations:	The plan could incorporate climate considerations into the type of projects that are selected and prioritized.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem persists
	Conduct outreach to encourage agencies to voluntarily integrate hazard mitigation into initiatives		Lack of accountability; unsustainable





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	Leave it up to municipalities	Not Cost Effective
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Action 2024-Broome County-19. Addressing Health Needs in Shelters

Action Name:	Action 2024-Broome County-19. Addressing Health Needs in Shelters	
Description of the Problem:	The relocation to a shelter during hazard events can affect the physical, mental, and emotional health needs of individuals and families. Some socially vulnerable populations may also need extra physical and mental care.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	Various departments and organizations will plan and prepare for different hazard scenarios identifying the range of health services needed and developing strategies for delivering services in an effective and consistent manner across shelter locations.	
Lead Agency:	Department of Health	
Supporting Agencies:	County Emergency Services, Office for the Aging, County Department of Social Services, American Red Cross Southern Tier Chapter, Guthrie, UHS	
Estimated Cost:	Staff Time	
Potential Funding Sources:	County Operating Budget	
Implementation Timeline:	Within three years – On-going	
Goals Met:	2, 3	
Benefits:	Maximize existing resources and programs to support residents during disasters.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This activity focuses on increasing services and access to services for those who are considered socially vulnerable, such as people older than 65.	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	This activity improves the County's sheltering and health capabilities.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is leading to a storm increase in frequency and intensity which may displace more individuals into shelters.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem persists
	Leave the issue up to the municipalities	Not Cost-Effective and does not address County owned shelters
	Construct a PPE station	Individuals in a shelter may be unaware of the location of a PPE or may be unable to access it





Action 2024-Broome County-20. Enhance Partnership with County Soil and Water Conservation District

Action Name:	Action 2024-Broome County-20. Enhance Partnership with County Soil and Water Conservation District		
Description of the Problem:	The County needs to make better use of the Soil and Water Conservation District's numerous programs and services that relate to hazard mitigation and resilience.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will increase collaboration with the Soil and Water Conservation District by promoting the existing educational and outreach programs and resources. Examples include developing projects to create or enhance existing wetland systems; consulting with the District on freeboard requirements; considering projects like reforestation and cover crop programs as mitigation activities; considering how invasive species management activities affect hazard impacts (e.g., tree removal on erosion and extreme heat, threats to power lines during storms, impacts to parks); and incorporating best management farming practices (i.e., cover crops) at facilities vulnerable to water shortages during drought events.		
Lead Agency:	Department of Public Works, Department of Planning		
Supporting Agencies:	County Soil and Water Conservation District		
Estimated Cost:	Staff Time		
Potential Funding Sources:	County Operating Budget		
Implementation Timeline:	Within two years		
Goals Met:	2		
Benefits:	This activity will maximize existing resources and leverage ongoing initiatives to promote the implementation of mitigation actions.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action increases the utilization of the County Soil and Water Conservation District.		
Impact on Future Development:	N/A		
Climate Change Considerations:	N/A		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No action	Current problem persists
	Hire additional staff to coordinate across agencies	Not cost-effective
	Leave the responsibility of coordination up to the municipalities	Not cost-effective





Action 2024-Broome County-21. Establish River Stewardship Program

Action Name:	Action 2024-Broome County-21. Establish River Stewardship Program	
Description of the Problem:	There are various organizations that work to protect and improve rivers at a regional level, but Broome County lacks a local agency to serve as a riverine steward.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The County Department of Planning will explore mechanisms for establishing a Riverine Stewardship Program to bring together stakeholders and agencies to support increased education and community engagement on issues related to protecting and improving our waterways, addressing flood mitigation, and promoting sustainable use and enjoyment of these resources. .	
Lead Agency:	County Department of Planning	
Supporting Agencies:	Upper Susquehanna Coalition, Broome County Environment Management Council, CCE Broome	
Estimated Cost:	Staff Time	
Potential Funding Sources:	County Operating Budget	
Implementation Timeline:	Within two years	
Goals Met:	2	
Benefits:	This activity will enable the consideration of the ecological and recreational benefits of flood mitigation projects.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	Critical facilities in the County may be impacted by debris in streams.	
Impact of Capabilities:	This action improves the County's ability to protect and improve rivers located within the County.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of precipitation events that may impact water levels in rivers.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem persists
	Hire additional staff to address river stewardship	Not preferred





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	Leave responsibility up to the state	The State may be unaware of river-related issues that the County experiences
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Action 2024-Broome County-22. Assessing Critical Facilities in the Floodplain

Action Name:	Action 2024-Broome County-22. Assessing Critical Facilities in the Floodplain		
Description of the Problem:	Of the County’s 1,428 critical facilities and lifelines, 401 are in the 0.2-percent annual chance floodplain and are at risk from excessive flooding.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will work with facility owners to evaluate the need for potential mitigation projects to protect the dams from the 500-year flood or worst-case scenario. Potentially feasible projects may include the following: elevation certificates, dry floodproofing, backup power supply management, structural retrofits, or relocation. Private owners will need to determine the most cost-effective and feasible mitigation action for these facilities.		
Lead Agency:	Department of Public Works		
Supporting Agencies:	Department of Planning, Emergency Services, private property owners		
Estimated Cost:	Staff Time		
Potential Funding Sources:	County Operating Budget, Potential grant funding		
Implementation Timeline:	Within three years		
Goals Met:	1, 5		
Benefits:	This project will help the County determine which critical facilities and lifelines are protected to the worst-case scenario and which require mitigation improvements.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Some socially vulnerable populations may be more dependent on critical facilities for older adult housing and emergency sheltering capabilities.		
Impact on Critical Facilities/Lifelines:	This action addresses critical facilities in the floodplain.		
Impact of Capabilities:	This action increases the County’s capability to keep critical facilities operating.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of precipitation events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem persists
	The county implements mitigation actions in the inundation areas		Does not reduce risk





SECTION 9.1. BROOME COUNTY

	Leave responsibility up to the municipalities	Some critical facilities are County owned
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Action 2024-Broome County-23. Environmental Health Emergency Preparedness

Action Name:	Action 2024-Broome County-23. Environmental Health Emergency Preparedness	
Description of the Problem:	The County is increasingly facing environmental health issues, such as degradation of air quality, that are exacerbated by climate stressors, such as intensifying extreme heat events and more severe wildfires. These events can disproportionately affect socially vulnerable populations.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The County will invest in air quality sensors and establish a process to distribute public education materials, masks, and other appropriate personal protective equipment (i.e., COVID or other disease tests). The County will also develop a strategy to provide temporary shelter during times of extreme wildfire smoke, including methods of outreach (similar to extreme heat and cooling shelters).	
Lead Agency:	County Department of Health	
Supporting Agencies:	County Department of Public Works, Department of Planning, Department of Social Services, Office for the Aging, Emergency Services	
Estimated Cost:	\$10,000 to \$100,000	
Potential Funding Sources:	State grants, FEMA BRIC, USDA	
Implementation Timeline:	Within five years	
Goals Met:	1, 4	
Benefits:	This activity will better prepare the County to distribute and coordinate resources when an emergency occurs.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This activity addresses environmental health impacts that may disproportionately affect individuals with preexisting health conditions or those under five or over 65.	
Impact on Critical Facilities/Lifelines:	Some facilities will be used as PPE distribution centers and will be used as temporary shelters during extreme-hazard events.	
Impact of Capabilities:	This action strengthens the County's ability to handle environmental health issues.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is linked to an increase in extreme temperature events, droughts, wildfires, and disease outbreaks.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem persists
	Make personal protective equipment available throughout the year	Does not reduce risk during emergency events





SECTION 9.1. BROOME COUNTY

Leave up to municipalities

Some municipalities do not have the staffing capabilities to coordinate this





Action 2024-Broome County-24. Tick and Invasive Species Preparedness

Action Name:	Action 2024-Broome County-24. Tick and Invasive Species Preparedness	
Description of the Problem:	The County regularly experiences invasive species impacts and not all residents and visitors are aware when there is an outbreak.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The County will identify areas that are favorable to ticks and other insects that can pass on diseases using field surveys and mapping tools. The County will also identify what resources are currently available to areas with high tick populations. Based on these findings, the County will create a plan, map, and fact sheet to convey and disseminate data and prioritize areas for additional resources at these sites and others, such as community centers or trailheads. Some resources may include additional signage, public education materials, and distribution of tick identification kits.	
Lead Agency:	County Department of Health	
Supporting Agencies:	County Department of Public Works, Department of Planning, Department of Social Services, Office for the Aging, Emergency Services	
Estimated Cost:	\$10,000 to \$100,000	
Potential Funding Sources:	State grants, FEMA BRIC, USDA	
Implementation Timeline:	Within five years	
Goals Met:	2, 4	
Benefits:	This activity would help ensure that the County is prepared for outbreaks of future tick or invasive species events.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This activity addresses environmental health impacts that may disproportionately affect individuals with preexisting health conditions or those under five or over 65.	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	This action strengthens the County's capability to address disease outbreaks.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is creating changing environmental conditions that may be more suitable for disease-carrying vectors.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem persists
	Increase signage everywhere	Does not reduce the risk of exposure





SECTION 9.1. BROOME COUNTY

Leave action up to the state.

The State may not be aware of problem areas specific to the County.





Action 2024-Broome County-25. Enhance Higher Education Partnerships to Reduce Hazard Vulnerabilities

Action Name:	Action 2024-Broome County-25. Enhance Higher Education Partnerships to Reduce Hazard Vulnerabilities	
Description of the Problem:	The County contains several higher education institutions that conduct research related to hazard mitigation and planning. This research could supplement existing initiatives in the County that lack staffing and resources.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The County will leverage educational institutions to provide the expertise, technical resources, and research support that the County needs to improve its resilience to hazards by forming partnerships. The County will also create research opportunities for internships for assistance with future Planning initiatives.	
Lead Agency:	County Department of Planning	
Supporting Agencies:	Binghamton University, CCE, and SUNY Broome	
Estimated Cost:	Staff Time	
Potential Funding Sources:	County Operating Budget; State	
Implementation Timeline:	Within two years – on-going	
Goals Met:	2, 5, 6	
Benefits:	This action will increase the County’s capabilities without significantly increasing expenditures.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be unaware of resources available in relation to hazard mitigation and leveraging institutional information may supplement their hazard mitigation information.	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	This action increases the County’s education and outreach initiative in relation to hazard mitigation.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is leading to an increase in the intensity and frequency of storm events and flooding and is also leading to an increase in drought, extreme temperature, invasive species, and disease outbreaks.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem persists





SECTION 9.1. BROOME COUNTY

	Hire a full-time staff member to coordinate with universities	Not cost-effective
	Hire a GIS staff member who specializes in hazard maps used for education.	Not cost-effective





Action 2024-Broome County-26. Enhance Broome County's Inventory and Data Tools to Address Risk and Resiliency

Action Name:	Action 2024-Broome County-26. Enhance Broome County's Inventory and Data Tools to Address Risk and Resiliency		
Description of the Problem:	Broome County collects information on various infrastructure and activities on an annual basis, but in most cases, the information does not include risk or vulnerability measures.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	Broome County will explore options to enhance data collection for various assets to integrate measures of risk and vulnerability.		
Lead Agency:	County Department of Planning		
Supporting Agencies:	Department of Social Services, Department of Health, Department of Public Works		
Estimated Cost:	\$10,000 to \$25,000		
Potential Funding Sources:	FEMA BRIC, State		
Implementation Timeline:	Within two years		
Goals Met:	1, 5, 6		
Benefits:	Improve understanding of at-risk assets and population and allow the County to make more informed decisions.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will provide an opportunity to identify methods to collect information on impacts to vulnerable populations.		
Impact on Critical Facilities/Lifelines:	Data collection that integrates risk and vulnerability information would help critical facility owners come up with additional mitigation measures for these facilities.		
Impact of Capabilities:	This action strengthens the County's knowledge of risk and vulnerability for facilities located within the County.		
Impact on Future Development:	This action will provide an opportunity to improve building permit data by identifying permits located within the floodplain.		
Climate Change Considerations:	Climate change is increasing the risk and vulnerability of infrastructure to increasing hazard events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem persists
	Research open-source datasets		Not cost-effective; not specific or fine enough resolution for Broome County
	Leave responsibility up to the municipalities.		Not cost-effective and some municipalities do not have the staffing capabilities.





Action 2024-Broome County-27. Natural Disaster Social Services Response

Action Name:	Action 2024-Broome County-27. Natural Disaster Social Services Response		
Description of the Problem:	County residents experience a loss of housing and resources due to natural hazard events.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will create a staffing and job list so that the County can deploy staff to areas of shelter, refuge, and temporary housing for vulnerable populations that are impacted by a hazard event. Some staff will also transport or provide supplies to individuals in need, including processing applications for benefits such as SNAP or Daycare needs.		
Lead Agency:	BC Department of Social Services		
Supporting Agencies:	Mental Health, Office for Aging, and Emergency Services.		
Estimated Cost:	Staff Time		
Potential Funding Sources:	HMGP, FMA, OTDA, OCFS, HUD		
Implementation Timeline:	Within 5 Years, Ongoing once implemented		
Goals Met:	1, 3, 4		
Benefits:	This action provides relief to those affected by a disaster through housing support and resource needs.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will be better supported during a hazard event in terms of housing and any resources they may need access to.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action improves the County’s capability to support County residents in need.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in frequency and intensity of hazard events which may lead to an increase in housing loss and resource needs.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Leave responsibility up to the municipalities.		The municipalities do not have the staffing capabilities to handle all needs.





SECTION 9.1. BROOME COUNTY

	Wait for State and Federal support after a disaster	The State and Federal entities may have numerous County's to support and may not be timely
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Action 2024-Broome County-28. Municipal Infrastructure Mapping and Database

Action Name:	Action 2024-Broome County-28. Municipal Infrastructure Mapping and Database		
Description of the Problem:	There is a complex system of infrastructure and utilities that exist throughout the County. Current records are based on information provided by municipalities and gaps exist in the database.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	Broome County will improve the mapping and data of these systems to support better management and coordination in the future. The County will also develop interactive mapping solutions and databases to address existing gaps in the utility and infrastructure data.		
Lead Agency:	Broome County Planning/GIS		
Supporting Agencies:	Local Municipalities, Utility Providers		
Estimated Cost:	\$200,000		
Potential Funding Sources:	HMGP, BRIC, FMA		
Implementation Timeline:	Within 5 Years, Ongoing once implemented		
Goals Met:	1		
Benefits:	This action will allow for easy sharing of information across county departments and municipal partners, enhance responsiveness to issues, and improve asset management.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	This action will ensure that the County has the most up-to-date infrastructure data, including critical facilities.		
Impact of Capabilities:	This action strengthens the County's ability to create accurate and up-to-date maps and ensures better management and coordination in the future.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of hazard events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Hire a GIS staff member to gather new data and map the current hazards		Not cost-effective





SECTION 9.1. BROOME COUNTY

	Leave mapping up to local and State entities	May not be the most accurate and up-to-date information
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Action 2024-Broome County-29. Nanticoke Dam Inundation

Action Name:	Action 2024-Broome County-29. Nanticoke Dam Inundation	
Description of the Problem:	There is a Dam that is on County property that is located in the Town of Nanticoke and no studies have been performed by the Town due to the property being owned by the County.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The County will work with the Town to establish a partnership to ensure the integrity and safety of the dam. The County will work with the Town to conduct a study on the dam and will ensure the Town has copies of crucial dam information for the safety of the Town residents.	
Lead Agency:	Broome County Planning Department	
Supporting Agencies:	Town of Nanticoke	
Estimated Cost:	TBD	
Potential Funding Sources:	HMGP, FMA, BRIC, County Budget	
Implementation Timeline:	Within 5 years, Ongoing once established	
Goals Met:	1, 3, 6	
Benefits:	The County and Town will be better protected and better informed on infrastructure related to the dam.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be located within the dam inundation zone and need to be notified of potential evacuation routes.	
Impact on Critical Facilities/Lifelines:	Critical facilities may be located within the dam inundation zone and need to have protection measures in case a dam failure occurs.	
Impact of Capabilities:	This action would strengthen the County's coordination with the Town.	
Impact on Future Development:	Future development may be impacted if it occurs in the inundation zone.	
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of storm events which may affect dam infrastructure.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	
	Leave responsibility up to the State.	The State does not own the land and would need County support.





SECTION 9.

9.2 TOWN OF BARKER

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist the public and private sectors in the Town of Barker with reducing losses from future hazard events. This annex is not guidance on 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 Town of Barker, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.3 HAZARD MITIGATION PLANNING TEAM

The Town of Barker identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Code Enforcement Officer represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.2-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.2-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Jim Dedrick, Code Enforcement Officer and Building Inspector Address: 151 Hyde St., Whitney Point, NY 13744 Phone Number: (607) 648-6880 Email: barkercode@stny.rr.com	Name/Title: David Mackey, Highway Superintendent Address: 151 Hyde St., Whitney Point, NY 13744 Phone Number: (607) 692-3990 Email: tobhiway@stny.rr.com
NFIP Floodplain Administrator	
Name/Title: Address: Phone Number: Email:	
Additional Contributors	
Name/Title: - Method of Participation: -	



9.4 COMMUNITY PROFILE

The Town of Barker is on the east county line of Broome County and is north of Binghamton, NY. The Town of Barker has a total area of 41.8 square miles. Interstate 81, U.S. Route 11, New York State Route 79, and the Tioughnioga River pass through the town. The Town is bordered to the north by the Town of Triangle, on the east by Chenango County, on the south by the Town of Fenton, Chenango, and Maine, and on the west by the Town of Nanticoke. The Town of Barker includes the hamlets of Chenango Forks, Hydeville, and Itaska (Tetra Tech 2019).

Home rule is strong in New York State and thus, each town and village has its own governing body. Towns are made up of a Town Board and Supervisor. Villages generally have a Mayor, Clerk, and Council. Along with town and village roads, any public water and sewer systems are operated by the local municipality, though they may cooperate with County departments. Each municipality has charge over its planning and zoning and uses the County personnel as a resource (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Barker was 2,509, an 8.2 percent decrease from the 2010 Census.

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 2020 U.S. Census indicates that 5.7 percent of the population is 5 years of age or younger, 18.5 percent is 65 years of age or older, 2 percent is non-English speaking, 21.4 percent is below the poverty threshold, and 13.6 percent is considered disabled.

9.5 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

The Town of Barker 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/or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Barker to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

9.5.1 Planning, Legal, and Regulatory Capability and Integration

Table summarizes the planning and regulatory tools that are available to the Town.

Table 9.2-2. Planning, Legal, 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)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Local Law No. 1-2022 (A Local Law Providing for the Administration of the NY State Uniform Fire Prevention and Building Code)	State and Local	Town Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk? This local law provides for the administration and enforcement of the New York Uniform Fire Prevention and Building Code and the State Energy Conservation Construction Code in the Town. It includes the creation of an office of the Code Enforcement Officer; institutes building permit requirements; outlines instruction inspection provisions; and mandates Certificates of Compliance.				
Zoning/Land Use Code	Yes	Local Law No. 1-2006	Local	Town Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk? This local law clarifies Agricultural-Residential Districts, Agricultural Districts, Commercial Districts, Multiple Dwelling Districts, and protection of the night sky. It outlines different land use types, regulates commercial extraction of natural resources, and designates the responsibilities of the Town Code Enforcement Officer.				
Subdivision Code	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Site Plan Code	Yes	Local Law No. 1-2022 (A Local Law Providing for the Administration of the NY State Uniform Fire Prevention and Building Code)	Local and County	Town Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk? This local law requires site plans for the issuance of all building permits.				
Stormwater Management Code	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-





	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)	Responsible Person, Department, or Agency
How has or will this be integrated with the HMP and how does this reduce risk?				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
How has or will this be integrated with the HMP and how does this reduce risk? In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
Growth Management	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Environmental Protection Ordinance(s)	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Flood Damage Prevention Ordinance	Yes	LL#3 of 1987	Federal, State, County, and Local	Town Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk?				
Wellhead Protection	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Emergency Management Ordinance	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Climate Change Ordinance	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	Yes	Local Law No. 2-2012 (Road Preservation Law); Local Law No. 2-1999 (Regulating the Siting of Telecommunications Towers); Local Law 2-2020 (Computer System Security Breach Notification Policy)	Local	Superintendent of Highways; Town Board
How has or will this be integrated with the HMP and how does this reduce risk? <ul style="list-style-type: none"> The Road Preservation Law regulates high-impact activities that could damage municipal roads. The Regulating the Siting of Telecommunications Towers regulates where telecommunications towers and associated infrastructure can be constructed within the Town. The Computer System Security Breach Notification Policy regulates how the Town should provide notice of a security breach. 				
Planning Documents				
General/Comprehensive Plan	No	-	-	-





	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)	Responsible Person, Department, or Agency
How has or will this be integrated with the HMP and how does this reduce risk?				
Capital Improvement Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Disaster Debris Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Floodplain Management or Watershed Plan	Yes	LL#3 of 1987	Local	Town Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk?				
Stormwater Management Plan	Yes	Stormwater Management Plan 2008	Local	Town Board
How has or will this be integrated with the HMP and how does this reduce risk?				
Open Space Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Urban Water Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Habitat Conservation Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Economic Development Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Wildfire Protection Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Forest Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Transportation Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Agriculture Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				





	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)	Responsible Person, Department, or Agency
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Tourism Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Business/ Downtown Development Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYSDHSES
How has or will this be integrated with the HMP and how does this reduce risk? This portion of the CEMP addresses the State’s overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA’s five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operations Plan, 2/14/2008	County	Broome County Emergency Management
How has or will this be integrated with the HMP and how does this reduce risk? The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	Local and state	NYS
How has or will this be integrated with the HMP and how does this reduce risk?				





	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)	Responsible Person, Department, or Agency
This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<p>How has or will this be integrated with the HMP and how does this reduce risk? A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following:</p> <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and - provide an overview of the stakeholder planning group (SPG). 				
Other	Yes	Broome County Emergency Medical Services System Hazardous Materials Incident Response Plan (2008)	County	County OEM
<p>How has or will this be integrated with the HMP and how does this reduce risk?</p> <ul style="list-style-type: none"> • Hazardous Materials Incident Response Plan: The purpose of the plan is the coordination of on-scene emergency medical care, transportation, and hospital treatment for victims of a hazardous materials emergency in Broome County. 				

9.5.2 Development and Permitting Capability

Table summarizes the capabilities of the Town of Barker to oversee and track development.

Table 9.2-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> • If you issue development permits, what department is responsible? • If you do not issue development permits, what is your process for tracking new development? 	Yes	The Town issues development permits,
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-





Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you have a buildable land inventory? • If you have a buildable land inventory, please describe	No	-
Describe the level of build-out in your jurisdiction.	N/A	There is available land for build-out within the Town.

9.5.3 Administrative and Technical Capability

Table 9.2-4 summarizes potential staff and personnel resources available to the Town of Barker and their current responsibilities that contribute to hazard mitigation.

Table 9.2-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	No	-
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	Town Department of Public Works
Construction/Building/Code Enforcement Department	Yes	Town Code Enforcement Office
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Vegetation Management
Mutual aid agreements	Yes	Highway Department -The town is responsible for taking care of 67 miles of road.
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	No	-
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	No	County provides support



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Code Enforcement
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	County support
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Highway Superintendent
Grant writer(s)	Yes	Town Supervisor
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

9.5.4 Fiscal Capability

Table 9.2-5 summarizes financial resources available to the Town of Barker.

Table 9.2-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	No
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

9.5.5 Education and Outreach Capability

Table 9.2-6 summarizes the education and outreach resources available to the Town of Barker.





Table 9.2-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

9.5.6 Community Classifications

Table 9.2-7 summarizes classifications for community programs available to the Town of Barker.

Table 9.2-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4/5	2010
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4/5	Unknown
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

N/A Not applicable
 - Unavailable

9.5.7 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 9.2-8 summarizes the adaptive capacity for each





identified hazard of concern and the Town’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 9.2-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

9.5.8 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.2-1 is responsible for maintaining this information.

9.5.9 NFIP Statistics

Table 9.2-9 summarizes the NFIP statistics for the Town of Barker.

Table 9.2-9. Town of Barker NFIP Summary of Policy and Claim Statistics

# Policies	4
# Claims (Losses)	4
Total Loss Payments	\$4,034
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0
# RL/SRL Properties Within the 1% Annual Chance Flood Boundary	1
# RL/SRL Properties Within the 0.2% Annual Chance Flood Boundary	1

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.

9.5.10 Flood Vulnerability Summary

Table 9.2-10 provides a summary of the NFIP program in the Town of Barker.

Table 9.2-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Problems with stormwater runoff, no flood damage.
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	No current interest in mitigation.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown, at this time.
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Town visits an area to determine Substantial Damage. No recent Substantial Damage declarations.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	No recent Substantial Damage declarations.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No



NFIP Topic	Comments
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit reviews
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	Existing codes
What are the barriers to running an effective NFIP program in the community, if any?	None
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown, at this time.
What is the local law number or municipal code of your flood damage prevention ordinance?	Local Law No. 1-1992
What is the date that your flood damage prevention ordinance was last amended?	February 5, 1992
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Yes
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Yes

9.6 GROWTH/DEVELOPMENT TRENDS

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to 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 9.2-11 through Table 9.2-13.

Table 9.2-11. Number of Building Permits for New Construction Issued Since the Previous

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	2	0	50	52
Permits within SFHA	0	0	0	0
2020				
Total Permits	5	0	57	62
Permits within SFHA	0	0	0	0





	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2021				
Total Permits	8	0	38	46
Permits within SFHA	0	0	0	0
2022				
Total Permits	8	0	58	66
Permits within SFHA	0	0	0	0
2023				
Total Permits	3	0	18	21
Permits within SFHA	0	0	0	0

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

Table 9.2-12. Recent Major Development and Infrastructure from 2018 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
Bridge-wearing surface & membrane replacement maintenance project	Infrastructure	1	Hyde Street over Castle Creek	No	Completed.

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

Table 9.2-13. 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
None Anticipated.					

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

9.7 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 Town of Barker’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

9.7.1 Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.7-1 through Figure 9.7-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for





hazards that can be identified using mapping techniques and technologies and for which Barker has significant exposure. The maps show the location of potential new development, where available.

Figure 9.7-1. Town of Barker Flood Hazard Area Extent and Location Map

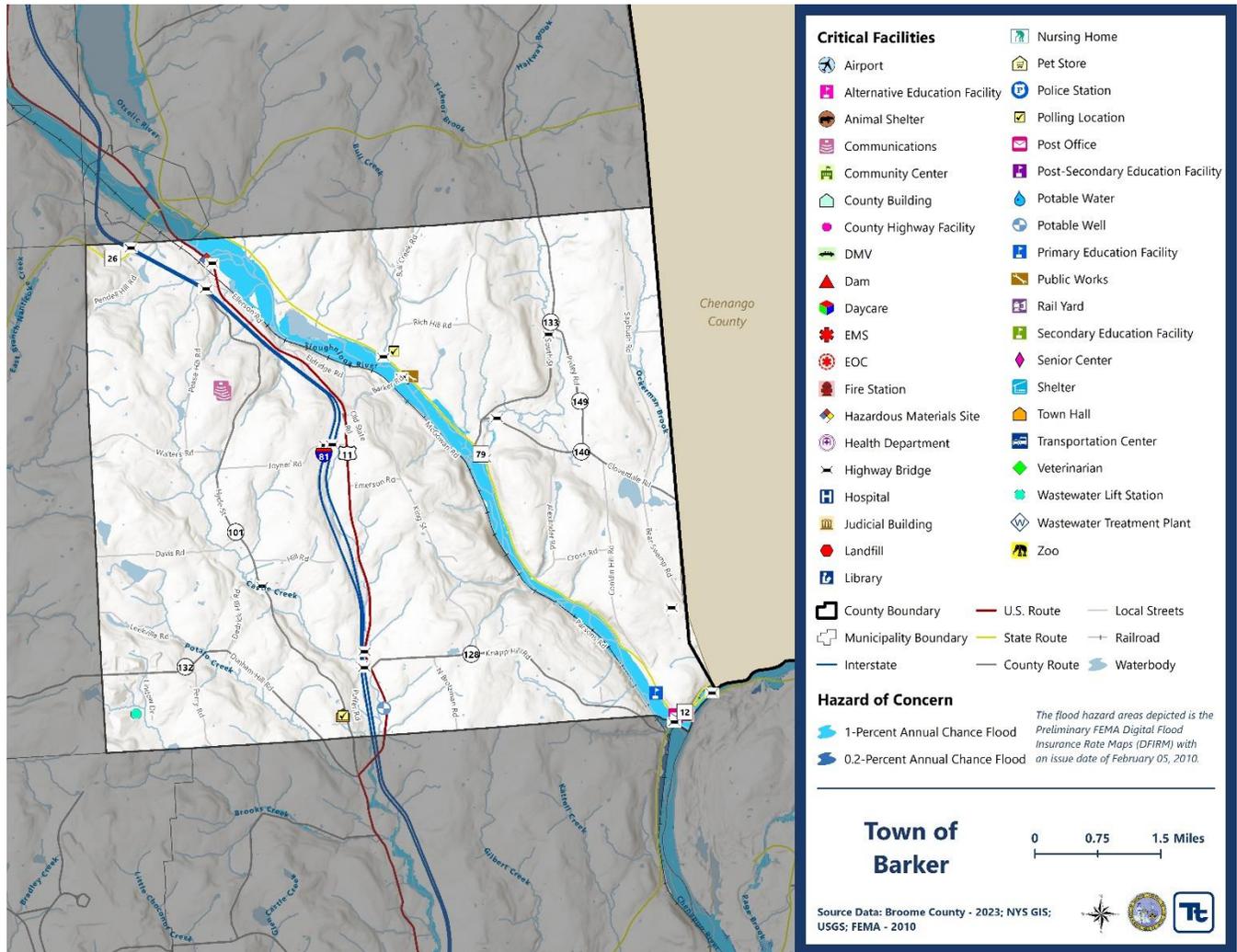
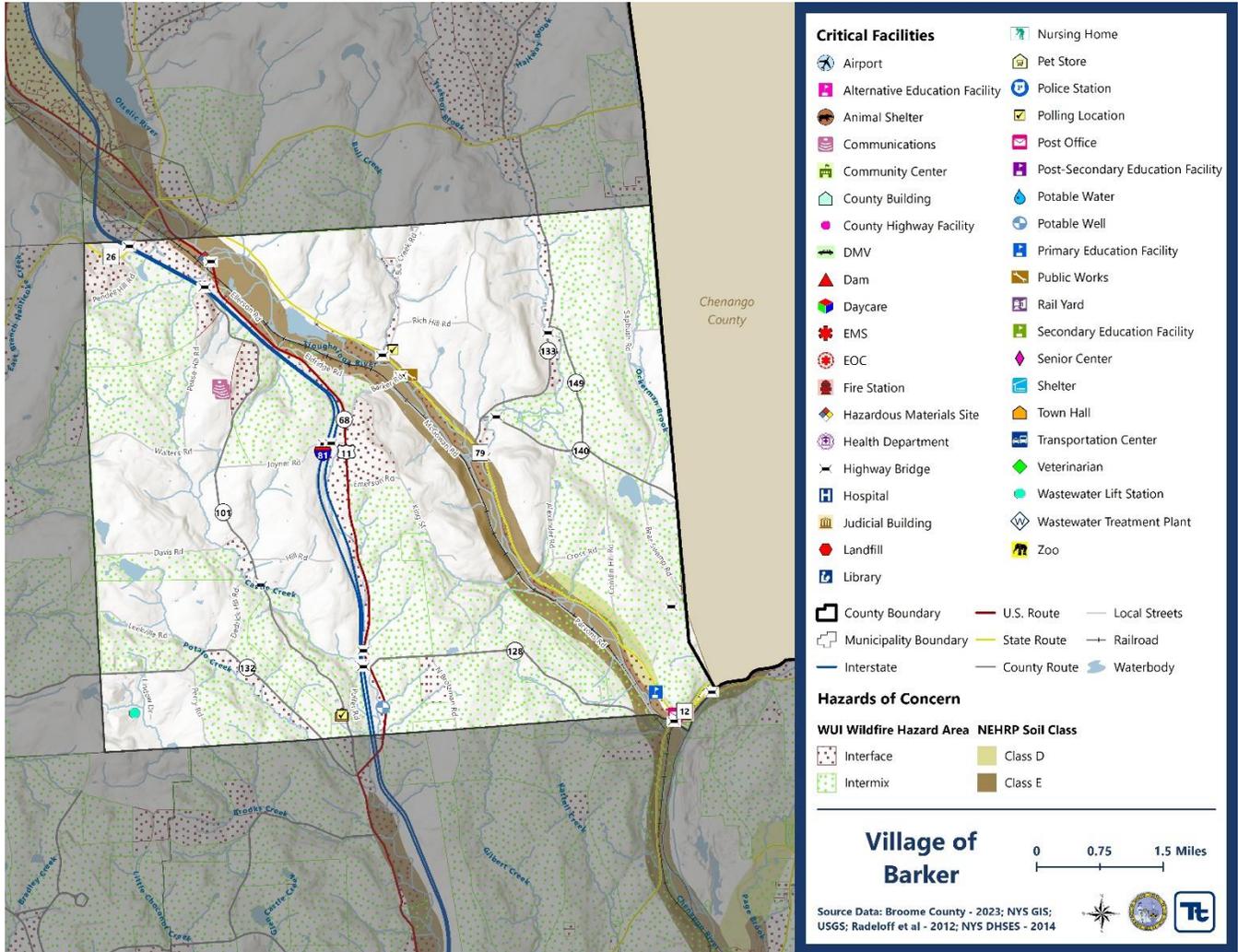




Figure 9.7-2. Town of Barker Wildfire Hazard Area Extent and Location Map





9.7.2 Hazard Event History

The history of natural and non-natural hazard events in the Town of Barker is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.2-14. Hazard Event History in the Town of Barker

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	Damages were seen in the Town such as downed trees and power lines.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town was subject to closures and masking/social distancing requirements.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	Flood damages were seen to roads and infrastructure.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Damages were seen to daily functions and accessibility to roads.

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



9.7.3 Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Barker.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Barker 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 Town indicated the following:

- The Town reviewed the preliminary rankings and had no changes.

Table 9.2-15 shows Barker’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.2-15. Hazard Ranking

Hazard	Rank
Dam/Levee	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.2-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.



Table 9.2-16. Critical Facilities Flood Vulnerability

Name	Type	Vulnerability		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Annual Chance Event	0.2% Annual Chance Event		
Chenango Forks	Fire Station	No	Yes	2024-BarkerT-05	-
Bridge_1009230	Highway Bridge	Yes	Yes	-	Bridge was built to the 0.2% flood level.
Bridge_1030480	Highway Bridge	Yes	Yes	-	Bridge was built to the 0.2% flood level.
Bridge_1030490	Highway Bridge	Yes	Yes	-	Bridge was built to the 0.2% flood level.
Bridge_1030500	Highway Bridge	Yes	Yes	-	Bridge was built to the 0.2% flood level.
Bridge_2225310	Highway Bridge	Yes	Yes	-	Bridge was built to the 0.2% flood level.

There are no high-hazard dams located in the Town according to the U.S. Army Corps of Engineers National Dam Database.

9.7.4 Identified Issues

After review of the Town of Barker’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Barker identified the following vulnerabilities within their community:

- The culvert pipes along Dings Hollow Road, Ellerson Road, Conklin Hill Road, and Pease Hill Road are undersized and undermining the roads. The pipes cannot handle the velocity of high waters, impacting the roadways, causing erosion, and forcing road closures in these areas of the town.
- There is currently no maintenance program or plan in place for roadside easements. Without a program or plan in place, overgrown brush, grass, view obstructions, and drainage obstructions are impacting the Town. Overgrown brush and grass can impact the views of drivers on roadways. It can also lead to fuel for brush fires. Drainage obstructions can lead to roadway flooding, erosion, and damage to surrounding properties. A proper plan is needed to alleviate these problems.
- The Towns FIRMs are outdated.
- The Town is currently not participating in the NOAA StormReady Program.
- The Chenango Forks Fire Station is located in the 0.2% flood level.



- The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery regarding dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperature, flood, invasive and nuisance species, severe storms, severe winter storms, and wildfire utilizing a variety of outreach methods.

9.8 MITIGATION STRATEGY AND PRIORITIZATION

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

9.8.1 Past Mitigation Initiative Status

Table 9.2-17 indicates progress on the Town'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.

9.8.2 Additional Mitigation Efforts

Since the adoption of the County's first HMP, Barker has made significant mitigation progress in the following areas:

- Identification of Stormwater Management Opportunities
- Outreach and Coordination



Table 9.2-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Barker 1	Culvert Upgrades Throughout Town	Flood	Town Highway Dept.	The culvert pipes along Dings Hollow Road (2-4), Ellerson Road (1), Conklin Hill Road (4), and Pease Hill Road (2) are undersized and undermining the roads. The pipes cannot handle the velocity of high waters, impacting the roadways, causing erosion, and forcing road closures in these areas of the town. Replace and increase the size of the culverts, and install wing walls where necessary. Remove growth and silt from ditches, and installing rip rap to reduce erosion in the ditches were appropriate.	1. No Progress 2. Challenges with funding availability.	1. Keep in the 2024 HMP. 2. The Town will replace existing culverts along Dings Road, Ellerson Road, Conklin Hill Road, and Pease Hill Road with larger size culverts and install wing walls where necessary. The Town will also remove vegetation and silt from the ditches and install rip rap to reduce erosion. 3. N/A
T. Barker 2	Maintenance for Roadside Easements	All Hazards	Town Highway Dept., Town Planning Board	There is currently no maintenance program or plan in place for roadside easements. Without a program or plan in place, overgrown brush, grass, view obstructions, and drainage obstructions are impacting the	1. No Progress 2. Challenges with funding availability.	1. Keep in the 2024 HMP. 2. The Town Highway Department will develop and implement a scheduled maintenance program to maintain a drainage system located in the right-of-way



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				<p>Town. Overgrown brush and grass can impact the views of drivers on roadways. It can also lead to fuel for brush fires. Drainage obstructions can lead to roadway flooding, erosion, and damage to surrounding properties. A proper plan is needed to alleviate these problems. Develop and implement a scheduled maintenance program to maintain drainage systems located in the right-of-way areas with town highway forces to reduce flood damage related to clogged ditches and culverts during heavy rain events.</p>		<p>areas to reduce flood damage related to clogged ditches and culverts during heavy rain events. 3. N/A</p>
T. Barker 3	Assist in the update of flood plain (FIRM) maps – Jurisdictional Level.	Flood	BCDP/ NYSDEC, FEMA, USGS, USACE	FIRMS need an update. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC, and USGS; and identification of flood-prone areas outside of currently designated areas.	<ol style="list-style-type: none"> 1. No Progress 2. Challenges with funding availability. 	<ol style="list-style-type: none"> 1. Keep in the 2024 HMP. 2. The Town will attend FIRM map update meetings held by FEMA, NYDEC, and USGS and provide support in updating the outdated FIRMS to identify flood-prone locations outside of currently designated areas. 3.



Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, 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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Barker 4	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.	Severe Storm	Municipality with support from the County, NYSOEM, and FEMA	Town is currently not participating. "StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education, and awareness. Participation in the NOAA "StormReady" program shall include providing information on the "StormReady" program, facilitating public outreach and awareness programs, and supporting community storm risk reduction activities as appropriate. Specific actions addressed by "StormReady" participation include establishing a 24-hour Warning Point, increasing the number of ways EOC receives NWS warnings, increase the number of ways to disseminate warnings, monitoring hydrometeorological data, providing annual weather safety talks, training weather spotters, creating a formal	1. No Progress 2. Challenges with funding availability.	1. Keep in the 2024 HMP 2. The Town will explore funding options to participate in the NOAA StormReady Program and work towards becoming a StormReady community. 3. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinued, explain why.
				hazardous weather plan, host annual visits by NWS to communities, etc.		



9.8.3 Proposed Hazard Mitigation Initiatives for the HMP Update

Barker participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Barker 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 the Town’s priorities.

Table 9.2-18 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. Table 9.2-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.2-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	X		X	X		X		X	
Disease Outbreak	X			X	X		X			
Drought	X			X	X		X			
Earthquake	X			X	X		X			
Extreme Temperature	X			X	X		X			
Flood	X	X		X	X		X		X	
Invasive and Nuisance Species	X			X	X		X			
Severe Storm	X	X		X	X		X		X	
Severe Winter Storm	X			X	X		X			
Wildfire	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 stormwater 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 9.2-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-BarkerT-01	Culvert Upgrades	1	1	0	1	1	1	0	1	0	1	1	1	1	1	12	High
2024-BarkerT-02	Maintenance for Roadside Easements	1	1	1	1	1	1	1	1	0	1	1	1	0	0	11	High
2024-BarkerT-03	Update FEMA FIRMs	1	1	1	1	0	0	1	1	1	1	0	1	1	1	11	High
2024-BarkerT-04	Joining the NOAA StormReady Program	1	1	0	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-BarkerT-05	Critical Facility in Floodplain	1	1	1	0	1	1	1	0	1	1	1	1	1	1	12	High
2024-BarkerT-06	Public Education and Outreach	1	1	0	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-BarkerT-07	Certified Floodplain Manager Credentialing	1	1	0	1	1	1	0	1	1	1	1	1	1	1	12	High

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



Action 2024-BarkerT-01. Culvert Upgrades

Action Name:	2024-BarkerT-01	
Description of the Problem:	The culvert pipes along Dings Hollow Road, Ellerson Road, Conklin Hill Road, and Pease Hill Road are undersized and undermining the roads. The pipes cannot handle the velocity of high waters, impacting the roadways, causing erosion, and forcing road closures in these areas of the town.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will replace existing culverts along Dings Road, Ellerson Road, Conklin Hill Road, and Pease Hill Road with larger-sized culverts and install wing walls where necessary. The Town will also remove vegetation and silt from the ditches and install rip rap to reduce erosion.	
Lead Agency:	Town Highway Department	
Supporting Agencies:	N/A	
Estimated Cost:	High	
Potential Funding Sources:	HMGP, BRIC, municipal budget	
Implementation Timeline:	Medium	
Goals Met:	2	
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 can remain open or re-open sooner following a flood.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Areas that were previously vulnerable to frequent or severe flooding events will be less likely to be impacted by flooding events.	
Impact on Critical Facilities/Lifelines:	Access to health and medical facilities will be maintained, both for healthcare workers and the population who require treatment for injuries and illnesses.	
Impact of 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.	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	
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 a result of climate change.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists
	Elevate Roadway	Costly and may not solve the problem
	Relocate roadway	Not possible.



Action 2024-BarkerT-02. Maintenance for Roadside Easements

Action Name:	2024-BarkerT-02		
Description of the Problem:	There is currently no maintenance program or plan in place for roadside easements. Without a program or plan in place, overgrown brush, grass, view obstructions, and drainage obstructions are impacting the Town. Overgrown brush and grass can impact the views of drivers on roadways. It can also lead to fuel for brush fires. Drainage obstructions can lead to roadway flooding, erosion, and damage to surrounding properties. A proper plan is needed to alleviate these problems.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town Highway Department will develop and implement a scheduled maintenance program to maintain a drainage system located in the right-of-way areas to reduce flood damage related to clogged ditches and culverts during heavy rain events.		
Lead Agency:	Town Highway Department and Planning Board		
Supporting Agencies:	N/A		
Estimated Cost:	Low		
Potential Funding Sources:	<i>Municipal budget</i>		
Implementation Timeline:	Short		
Goals Met:	1		
Benefits:	Mitigate drainage obstructions and restore stormwater functions.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will protect the entire community from flood damage by mitigating and planning for debris accumulation in easements.		
Impact on Critical Facilities/Lifelines:	This action will protect critical facilities from flooding by restoring drainage systems located nearby.		
Impact of Capabilities:	N/A		
Impact on Future Development:	This action will protect future development that is located near the drainage system.		
Climate Change Considerations:	This action takes into consideration climate change impacts on the severity and frequency of flood and storm events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists
	Remove drainage system		The problem continues, not feasible.



	Deploy flood-barriers	Costly, the problem persists and can worsen with debris buildup.
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Action 2024-BarkerT-03. Update FEMA FIRMs

Action Name:	2024-BarkerT-03	
Description of the Problem:	The Town's FIRMs are outdated.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will attend FIRM map update meetings held by FEMA, NYDEC, and USGS and provide support in updating the outdated FIRMs to identify flood-prone locations outside of currently designated areas.	
Lead Agency:	BCDP/ NYSDEC, FEMA, USGS, USACE	
Supporting Agencies:	N/A	
Estimated Cost:	High	
Potential Funding Sources:	FEMA HMA	
Implementation Timeline:	Short	
Goals Met:	3	
Benefits:	Life safety precautions.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will identify areas of flood concern to protect residents who reside in those high-risk areas.	
Impact on Critical Facilities/Lifelines:	This action will identify areas of concern where critical facilities are subject to flood impacts.	
Impact of Capabilities:	This action will provide updated FIRM maps for Town planners and engineers.	
Impact on Future Development:	This action will help to guide safe and sustainable development outside of the floodplain, away from areas prone to flooding.	
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists
	Utilize outdated FIRMs	Not accurate information.
	Use County flood maps.	May not be locally accurate for the jurisdiction.



Action 2024-BarkerT-04. Joining the NOAA StormReady Program

Action Name:	2024-BarkerT-04	
Description of the Problem:	The Town is currently not participating in the NOAA StormReady Program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will explore funding options to participate in the NOAA StormReady Program and work towards becoming a StormReady community.	
Lead Agency:	Planning Department	
Supporting Agencies:	Broome County, NYSOEM, FEMA	
Estimated Cost:	Medium	
Potential Funding Sources:	NOAA, Municipal Budget	
Implementation Timeline:	Medium	
Goals Met:	3	
Benefits:	Protection against hazard events and enhancement of warning systems.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	By becoming a StormReady community, the Town will be able to provide educational tools and resources to socially vulnerable populations to better respond to hazard events such as severe storms and flooding.	
Impact on Critical Facilities/Lifelines:	This action will support community storm risk reduction activities to protect critical facilities and promote operations during hazard events.	
Impact of Capabilities:	By becoming a StormReady community, the Town will establish an NWS warning system to alert the community of hazard events.	
Impact on Future Development:	This action will protect future development within the Town from hazard events.	
Climate Change Considerations:	NOAA StormReady program considers climate change impacts on the severity and frequency of severe storm and flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
Alternatives	Action	
	Evaluation	
	No Action	Problem persists
	Rely on federal assistance only post-disaster	Costly, not a participating community in the Program.
Install a warning system.	Not participating in the Program to receive additional support and tools.	



Action 2024-BarkerT-05. Critical Facility in the Floodplain

Action Name:	2024-BarkerT-05		
Description of the Problem:	The Chenango Forks Fire Station is located in the 0.2% flood level.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	<p>The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at the Chenango Forks Fire Station to protect it from the 500-year flood level. Options include Elevation of the facility; floodproofing of the facility; and mobile flood barriers.</p> <p>Once the most cost-effective option is identified, the Town will carry out this mitigation project.</p>		
Lead Agency:	Town Highway Department		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget		
Implementation Timeline:	Medium		
Goals Met:	2		
Benefits:	Ensures the continuity of operation for the fire station.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.		
Impact on Critical Facilities/Lifelines:	This action will protect a fire station which is a critical facility, maintaining the critical services that it provides.		
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.		
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists



	Relocate facility	Relocation is expensive and results in the loss or delay of critical services in the immediate area.
	Establish plans to enter into an MOU with neighboring critical facilities to provide service during flood events.	Reduction in response times and delay of critical services in the immediate area.





Action 2024-BarkerT-06. Public Education and Outreach

Action Name:	2024-BarkerT-06		
Description of the Problem:	The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery regarding dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperature, floods, invasive and nuisance species, severe storms, severe winter storm, and wildfire utilizing a variety of outreach methods.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Emergency Management		
Supporting Agencies:	Town Administration, Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	2 years		
Goals Met:	1, 2, 3		
Benefits:	This action will improve the current public education and outreach program in the Town by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the Town.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the various hazards that may impact them in the Town.		
Impact on Critical Facilities/Lifelines:	Businesses, which may be considered critical facilities or lifelines, would be more informed on how to prepare for emergency events and mitigate the risks of potential hazards. With these businesses becoming more resilient, this action would contribute to their continuity of operations.		
Impact of Capabilities:	This action would build upon the Town's already existing public education and outreach efforts.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation



	No Action	Current methods remain the only ones used.
	Rely on state or federal resources.	Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.	Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.





Action 2024-BarkerT-07. Socially Vulnerable Populations Outreach

Action Name:	2024-BarkerT-07	
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations about the identified hazards of concern. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will create and improve public awareness and outreach, or utilize those from Broome County, on dam and levee failure, disease outbreak, drought, earthquakes, extreme temperature, flood, invasive and nuisance species, severe storms, severe winter storms, and wildfire risks for socially vulnerable populations. Methods of distribution may include Town events, the Town newsletters, social media, the Town website, and having the materials on display for the public at Town libraries and offices as well as at other regular local meetings, use of annual flyers, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website to meet the needs of the socially vulnerable populations. The Town will also consider hiring staff to work directly with socially vulnerable populations.	
Lead Agency:	Town Emergency Management	
Supporting Agencies:	Town Administration, Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget, HMGP	
Implementation Timeline:	2 years	
Goals Met:	1, 2, 3, 5	
Benefits:	This action will ensure an individual is working to identify and work with the socially vulnerable populations in the Borough. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	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.	
Impact on Critical Facilities/Lifelines:	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.	
Impact of Capabilities:	This action would build upon the Town's already existing public education and outreach efforts.	
Impact on Future Development:	N/A	



Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.





Action 2024-BarkerT-08. Certified Floodplain Manager Credentialling

Action Name:	2024-BarkerT-08	
Description of the Problem:	The Town does not have any certified floodplain managers (CFM) on staff. Becoming a CFM increases the depth of understanding when dealing with FEMA floodplains. The certifications ensure those that who bear it understand the regulatory requirements and procedures needed to make floodplain management work effectively and efficiently at the community level.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will provide training and/or certification for Town staff with NFIP regulations and floodplain management ordinances. Staff will be encouraged to become Certified Floodplain Managers via the Association of State Floodplain Manager’s CFM Certification Program.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Engineering, Construction Department, Town Administration	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 2, 3	
Benefits:	This action will increase the NFIP capabilities of the Town and assure the Town’s NFIP program has enough staff to accomplish its goals and reach NFIP compliance.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Officials that are up to date on flood risk are more likely to encourage development outside areas of high flood risk, which is where socially vulnerable populations have historically resided. Safer dwellings may be developed in a less vulnerable location.	
Impact on Critical Facilities/Lifelines:	The opportunity will exist for leaders and operators of utilities and other essential services to attend training and provide direction on ways they prepare for, plan for, and prevent interruptions in service as a result of a flood.	
Impact of Capabilities:	This action will enhance the Town’s current NFIP capabilities.	
Impact on Future Development:	Officials who understand best practices in floodplain management have the opportunity to influence future development and prevent unsafe buildings in hazard areas.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related events. This action will educate staff on NFIP regulations to assist with the flood hazard.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Current methods remain the only ones used.
	Hire outside contractors for floodplain administration.	Resources may be generalized and not specific to the risks in the Town.



	Establish shared service agreements for floodplain administration from neighboring municipalities.	
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SECTION 9.

9.3 CITY OF BINGHAMTON

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the City of Binghamton 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 City of Binghamton, describes who participated in the planning process, assesses the City’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.3.1 Hazard Mitigation Planning Team

The City of Binghamton identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many City departments. The Department of Planning, Housing, and Community Development represented the community on the Broome County HMP Planning Partnership and 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 9.3-1 summarizes City officials who participated in the development of the annex and in what capacity. Additional documentation of the City’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.3-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Juliet Berling, Director Planning Housing & Community Development Address: Binghamton City Hall, 38 Hawley St., Binghamton NY 13901 Phone Number: (607) 772-7028 Email: jmberling@cityofbinghamton.gov	Name/Title: Ron Lake, P. E., City Engineer Address: Binghamton City Hall, 38 Hawley St., Binghamton NY 13901 Phone Number: (607) 772-7007 Email: rblake@cityofbinghamton.gov
NFIP Floodplain Administrator	
Name/Title: Juliet Berling, Director Planning Housing & Community Development Address: Binghamton City Hall, 38 Hawley St., Binghamton NY 13901 Phone Number: (607) 772-7028 Email: jmberling@cityofbinghamton.gov	
Additional Contributors	
Name/Title: Franco Incitti, Engineer Method of Participation: Participated in Planning Partnership, including providing information on hazard event history, NFIP, and building permits in the city.	
Name/Title: Joshua Paludi, Commissioner Department of Public Works	





Primary Point of Contact	Alternate Point of Contact
Method of Participation: Method of Participation: Participated in Planning Partnership, including providing information on hazard event history, NFIP, storm/sewer separation and storm drain information.	
Name/Title:	
Method of Participation:	

9.3.2 Municipal Profile

The City of Binghamton is in the southern tier of New York State and is the county seat of Broome County. The City of Binghamton has a total area of 11.4 square miles. Binghamton is located at the confluence of two rivers, in the middle of a long but relatively narrow valley. The north branch of the Susquehanna River passes south of downtown. This branch rises in eastern New York and receives a number of tributaries above Binghamton. In the center of the city, the Chenango River feeds into the Susquehanna from the north. The City is divided into seven neighborhoods; Downtown Binghamton, the North Side, the East Side, the West Side, the First Ward, Ely Park, and the Southside (Tetra Tech 2019).

The mayor and councilors are elected to four-year terms and are limited to serving only two. The Binghamton City Council is a unicameral body consisting of seven Council members whose districts are defined by geographic population boundaries (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the City of Binghamton was 47,969, a 1.3 percent increase from the 2010 Census.

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 2020 U.S. Census indicates that 5.4 percent of the population is 5 years of age or younger, 16 percent is 65 years of age or older, 2.2 percent is non-English speaking, 31.0 percent is below the poverty threshold, and 20.1 percent is considered disabled.

9.3.3 Jurisdictional Capability Assessment and Integration

The City of Binghamton 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 City of Binghamton to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.3-2 summarizes the planning and regulatory tools that are available to the City. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.3-2. Planning, Legal, 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)	Responsible Person, Department or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	City Code, § 200, Building Construction. January 26, 2016	State and Local	Code Enforcement Officer
Provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code and the State Energy Conservation Construction Code in the City. It is adopted pursuant to § 10 of the Municipal Home Rule Law. It includes the creation of an office of the Code Enforcement Officer; institutes building permit requirements; outlines instruction inspection provisions; and mandates Certificates of Compliance.				
Zoning/Land Use Code	Yes	City Code, § 410, Zoning. March 2, 2023	Local	Planning
The Zoning Ordinance enacts the Comprehensive Plan adopted by City Council on August 1, 2014. The ordinance will: Promote the public health, safety and general welfare of the citizens; Provide adequate light, air, and privacy, and to secure safety from fire and other dangers; Prevent the overcrowding of land and the undue concentration of population; Protect natural features such as forested areas and water and drainage courses, and to minimize the hazards to persons and damage to property resulting from the accumulation or runoff of storm and flood waters; Protect and conserve the existing or planned character of all parts of the City and, thereby, aid in maintaining their stability and value, and to encourage the beneficial development of all parts of the City; Provide a guide for public policy and action that will facilitate the economical provision of public facilities and services, and for private enterprise in building development, investment and other economic activity relating to use of land and buildings throughout the City; Minimize conflict among uses of land and buildings, and to bring about the gradual conformity of uses of land and buildings throughout the City to the concepts of a well-considered plan; Divide the City into districts and to prescribe for each such district the trades, industries and land use activities that shall be permitted, excluded or subjected to special regulations before buildings are altered or erected, or land is used; Regulate and limit the height, bulk and location of buildings hereafter erected, to regulate and determine the area of yards, courts and other open spaces, and to regulate the density of population in any given area.				
Subdivision Code	Yes	City Code, § 360 Subdivision of Land. February 11, 2016	Local	Planning
All subdivision construction requests must be approved by the Planning Division. Subdivision applications must include the location of the 100-year floodplain, green space and open space information, grade and elevation data, the location of existing and proposed sewers, water mains, storm drainage, and culverts, with pipe sizes and direction to flow, both on the property and adjacent to it, and the location of proposed utilities.				





SECTION 9.3. City of Binghamton

	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)	Responsible Person, Department or Agency
Site Plan Code	Yes	City Code, § 410, Zoning. March 2, 2023	Local and County	Planning Commission
An application for Planning Commission Review and Approval shall be accompanied by a site plan and any other written and graphic material which will best support and illustrate the request. Site plans are required for certain land uses, such as multiple-unit dwellings. Site plans are required to demonstrate how a construction will alter drainage and green space.				
Stormwater Management Code	Yes	City Code, § 227, Erosion Control. January 26, 2016.	Local	Engineering & Planning
Establishes minimum erosion and stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction. This chapter seeks to meet that purpose by achieving the following objectives: <ul style="list-style-type: none"> • Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s). • Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised. • Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels. • Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality. • Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable. • Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety. • Promote an urban landscape with more green infrastructure in order to manage stormwater more effectively, and to use trees to minimize the urban heat island effect, create more sustainable plant and animal habitat, and improve the overall quality of life. • Make the connection between green infrastructure, aesthetically pleasing landscaping and increase property values. • Promote the reestablishment of vegetation in urban areas to improve aesthetics, health, and biodiversity. The ordinance sets requirements for permit obligations from the Office of Building and Construction, Stormwater Management Officer, and in some cases, require an urban runoff reduction plan.				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
Growth Management	No	-	-	-
Environmental Protection Ordinance(s)	No	-	-	-





	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)	Responsible Person, Department or Agency
Flood Damage Prevention Ordinance	Yes	City Code, § 240, Flood Damage Prevention. August 29, 2019.	Federal, State, County and Local	Planning Department
<p>Promotes the public health, safety, and general welfare, and minimizes public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters; Control filling, grading, dredging and other development which may increase erosion or flood damages; Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and Qualify for and maintain participation in the National Flood Insurance Program. <p>The ordinance allows the City to require certificates of elevation, with deficiencies resulting in a stop work order; require anchoring of all new construction and substantial improvements; requires all new constructions and substantial improvements to be elevated above the base flood elevation or be flood-proofed in the case of non-residential buildings; and lays out special requirements for construction in the Special Flood Hazard Area.</p>				
Wellhead Protection	No	-	-	-
Emergency Management Ordinance	No	-	-	-
Climate Change Ordinance	Yes	R07-19 A Resolution In Support of the U.S. Mayors Climate Protection Agreement February 20,2007; R11-99 A Resolution Adopting The New York State Climate Smart Communities Pledge October 26, 2011; R11-112 A Resolution In Support Of The City Of Binghamton Energy And Climate Action Plan. December 2 2011.	Local	Planning Department
Other: Fire Prevention Ordinance	Yes	City Code, § 235, Fire Prevention. October 24, 2018.	Local	Fire Department
Establishes a Bureau of Fire Prevention and allows the city to limit activities that could cause fires.				
Planning Documents				
General/Comprehensive Plan	Yes	Blueprint Binghamton, Binghamton, NY Comprehensive Plan	Local	Planning
<p>The Infrastructure section of the Comprehensive Plan recognizes the realities that Binghamton faces as a city trisected by rivers. In addition to strategies that address energy, utilities, and operating costs in an era of budget cuts, portion of the plan puts forth strategies to address the volume and quality of water flowing downstream which threaten Binghamton’s riverfront and low-lying properties during riverine flood events, stormwater regulations and opportunities for smaller-scale interventions that mitigate flash flood events caused by rainfall, and the relationship between water and urban land use</p>				





	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)	Responsible Person, Department or Agency
<p>decisions in the future. Objectives include reducing the impact of flooding and protecting neighborhoods & businesses and improve stormwater management and river water quality.</p> <p>The Environment and Open Space section of the Comprehensive Plan focuses on the City’s natural landscapes – rivers, riparian edges, and park spaces – as well as opportunities in daily life for Binghamton’s citizens to contribute to a healthier City, region, and planet by reducing waste output, increasing the urban forest and flora, and strengthening the connection between people and the parks, playgrounds, rivers, and trails that welcome healthy play so long as they remain clean and safe spaces. Objectives include increasing tree cover to improve air quality and the public realm and improving connections between the city and its natural assets.</p> <p>The Land Use section of the Comprehensive Plan includes a land use map; one of the key objectives is to encourage appropriate types and intensities of development and improve floodwater infrastructure in areas rendered vulnerable, both physically and economically, by the shifting floodplain.</p>				
Capital Improvement Plan	Yes	2023 Capital Improvements Plan	Local	Finance Department
Included as part of the 2023 Adopted Budget. Includes line items for floodwalls and levees.				
Disaster Debris Management Plan	No	-	-	-
Floodplain Management or Watershed Plan	Yes	City Code, § 240, Flood Damage Prevention. August 29, 2019.	Federal, State, County and Local	Planning Department
Promotes the public health, safety, and general welfare, and minimizes public and private losses due to flood conditions in specific areas.				
Stormwater Management Plan	Yes	City of Binghamton Storm Water Management Program Plan 2/2015	Local	Engineering Department
As the owner/operator of a system of conveyances (curbs, ditches, catch basins, manholes, and pipes) intended to collect stormwater and direct it to outfall locations for release into local waterways the City of Binghamton is designated as a municipal separate storm sewer system (MS4), and has been required to obtain coverage under the State Pollution Discharge Elimination System (SPDES) General Permit for Municipal Separate Storm Sewer Systems, GP-0-10-002. As per requirements in the general permit, the City has developed a Stormwater Management Program (SWMP) plan, incorporating minimum control measures designed to help the City maintain and improve the quality of the stormwater that is discharged from its conveyance system.				
Open Space Plan	Yes	Comprehensive Plan 2014, Section 7: Environment and Open Space	Local	Planning Department
The environment & open space chapter focuses on the City’s natural landscapes – rivers, riparian edges, and park spaces – as well as opportunities in daily life for Binghamton’s citizens to contribute to a healthier City, region, and planet by reducing waste output, increasing the urban forest and flora, and strengthening the connection between people and the parks, playgrounds, rivers, and trails that welcome healthy play so long as they remain clean and safe spaces.				
Urban Water Management Plan	Yes	City Codes, § 410, Zoning §410-55. E. Urban runoff reduction plan. March 2, 2023 City Code, § 227, Erosion Control. January 26, 2016 §227-10. Urban Runoff Reduction Plan requirements January 26, 2016.	Local	Planning Department Engineering Department





SECTION 9.3. City of Binghamton

	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)	Responsible Person, Department or Agency
<p>§410-55. E. Urban Runoff Reduction Plan shall be required for (1) an ancillary parking area or public off-street parking area of any size, (2) new off-street parking and/or loading areas, including driveways and maneuvering aisles, containing 20 or more parking spaces or 5,000 square feet or more of site area, whichever is less, and (3) additions, and alterations or resurfacing of existing off-street parking and/or loading areas, including driveways and maneuvering aisles, resulting in or involving 20 or more parking spaces or 5,000 square feet or more of site area, whichever is less. Fully defined in § 227-10. Urban Runoff Reduction Plans. Full Urban Runoff Reduction Plan Applicability, Procedures, Standards. Specifications and Maintenance requirements.</p>				
Habitat Conservation Plan	No	-	-	-
<p>Economic Development Plan</p> <p>The plan addresses the need to create jobs (and training) for workers of varied skill and education levels, the importance of encouraging new jobs at big companies that require big sites as well as small businesses and start-ups, strategies for promoting businesses that restore vibrancy Downtown, and the benefits of expanding connections between businesses and major institutional anchors. This Plan strives to position Binghamton as a City that businesses choose for its business-friendly environment, creative vibe, and high quality of life offered to employees.</p>				
Economic Development Plan	Yes	Comprehensive Plan 2014, Section 3: Economic Development	Local	Planning Department
Community Wildfire Protection Plan	No	-	-	-
<p>Community Forest Management Plan</p> <p>The Environment and Open Space section of the Comprehensive Plan outlines the Citizen Pruner Program, which recruits and trains citizens interested in tree health with the goal of developing volunteers able to supplement the tree maintenance work undertaken by the Parks and Recreation Department. Program participants receive training in proper tree maintenance in exchange for a commitment of at least three volunteer hours a month over the course of a season.</p>				
Community Forest Management Plan	Yes	Comprehensive Plan 2014, Section 7: Environment and Open Space	Local	Planning Department
<p>Transportation Plan</p> <p>The transportation chapter is about how Binghamton moves – more specifically about the multiple ways in which people travel through the City and how the City can better balance its public rights-of-way to serve those traveling on foot or by wheelchair, by bicycle, by bus, and by car to get where they need to go for work, for school, and for fun. The transportation strategies address the existing network of streets and parking areas, bike trails and transit services while seeking to add amenities, options, and alternatives to boost safety, convenience, and mobility via multiple modes. Objectives include upgrading and maintaining transportation infrastructure, addressing parking and maintenance issues, promoting alternative modes of transportation, and improving the pedestrian experience on city streets.</p>				
Transportation Plan	Yes	Comprehensive Plan 2014, Section 5: Transportation	Local	Planning Department
Agriculture Plan	No	-	-	-
<p>Climate Action/Resiliency/Sustainability Plan</p> <p>Note: The City is in the process of developing a 2023 Action Plan. Provides a description of the actions – policies, programs, and projects – a government will take to reduce a community’s dependence on fossil fuels and to meet its greenhouse gas (GHG) reduction target. Our Energy and Climate Action Plan Committee has undertaken an intensive process to explore policy and program options for reducing Binghamton’s emissions and has selected the most practical actions for our community. In this Plan, we have outlined those actions with details as to why they were selected and how they can be implemented. Categories for actions include Buildings and Energy, Transportation and Land Use, Waste Management,</p>				
Climate Action/Resiliency/Sustainability Plan	Yes	Energy and Climate Action Plan, December 2011.	Local	Planning Department





	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)	Responsible Person, Department or Agency
<p>Reduction, and Recycling, Local Food, Agricultural, and Urban Forestry, Outreach and Education, Government Action, and Adaptation.</p> <p>The Adaptation section outlines actions, including:</p> <ul style="list-style-type: none"> • Reduce vulnerability to widespread power grid outages by encouraging distributed generation from multiple renewable sources (solar, wind, biogas, landfill methane, etc.) • Reduce potential for grid overload and failure by decreasing demand through improved conservation and efficiency • Enact more rigorous building standards to increase the resiliency of the built environment to high winds, flooding, etc • Reduce reliance on centralized food systems where commodity production is concentrated in a few locations that may be vulnerable to climate disruptions such as storm damage, pest outbreaks, etc • Reduce vulnerability to flooding by promoting functional watersheds, including healthy forests and open space • Counteract urban heat island impacts by planting trees to provide shade and cooling • Reduce the area that emergency personnel must cover thus making delivery of disaster assistance more efficient (i.e. build more compact communities) • Make evacuation routes and procedures more visible and efficient • Reduce the number of miles and cost of repairing or replacing infrastructure (i.e., roads, bridges, electrical and sewer lines) • Conserve water and provide greater storage capacity and redundancy of that capacity for water so that more is available during more frequent and severe droughts • Improve early warning systems to increase preparation time and the quality and timeliness of information for households, government, and business • Ensure that special preparations assist the segments of the population most vulnerable to the weather phenomenon of a changing climate 				
Tourism Plan	No	-	-	-
Business/ Downtown Development Plan	Yes	Comprehensive Plan 2014, Section 5: Land Use/Zoning		Economic Development
<p>One of the objectives of the Land Use section of the Comprehensive Plan is to encourage new commercial uses Downtown and along traditional commercial corridors.</p>				
Other (for example NYRCR, etc.)	Yes	NYCR Broome County NY Rising Community Reconstruction Plan March 2014	County-Local	Engineering Department
<p>NYRCR Broome Plan's 5 of 12 strategies and their proposed and featured projects within the City of Binghamton are 1. Create flood-safe developments outside the floodplain.; Susquehanna Street Stormwater Detention, City of Binghamton. 2. Improve stormwater management to mitigate flash flooding Chamberlain Creek Channel Improvements, City of Binghamton; Susquehanna Street Stormwater Detention. 3. Increase resiliency of sewer and water supply systems to ensure continued operation of essential health and social services facilities during emergencies. Front Street Stormwater Separation. 4. Improve the resiliency of residential development in flood-prone areas. Exchange Street Housing Flood Resistance. 5. Ensure reliability and resiliency of critical public works infrastructure Scatter Site Stormwater Infrastructure, Scatter Site Sanitary Sewer Pump Station Resiliency.</p>				
Response/Recovery Planning				





	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)	Responsible Person, Department or Agency
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYSDHSES
<p>This portion of the CEMP addresses the State’s overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA’s five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their own mitigation plans and develop local strategies.</p>				
Continuity of Operations Plan	Yes	Emergency Operations Plan, 2/14/2008	County	Broome County Emergency Management
<p>The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.</p>				
Substantial Damage Response Plan	No	-	-	-
Threat & Hazard Identification & Risk Assessment	No	-	-	-
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	Local and state	
<p>This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.</p>				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State and County	NYSDOH, BCHD
<p>A Public Health Response Plan (PHRP) is a written plan designed to document historic, on-going, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health affect of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders.</p> <p>The PHRP will do the following:</p> <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and 				





	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)	Responsible Person, Department or Agency
- provide an overview of the stakeholder planning group (SPG).				
Other: Hazardous Materials Incident Response Plan	Yes	Broome County Emergency Medical Services System Hazardous Materials Incident Response Plan (2008)	County	County OEM
The purpose of the plan is the coordination of on-scene emergency medical care, transportation, and hospital treatment for victims of a hazardous materials emergency in Broome County.				

Development and Permitting Capability

Table 9.3-3 summarizes the capabilities of the City of Binghamton to oversee and track development.

Table 9.3-3. Development and Permitting Capability

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

Administrative and Technical Capability

Table 9.3-4 summarizes potential staff and personnel resources available to the City of Binghamton and their current responsibilities that contribute to hazard mitigation.

Table 9.3-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Commission is a seven-member commission comprised of local community members tasked with reviewing Special Use Permits and Site Plans for consistency with the standards and criteria set forth in the Zoning Code. (Planning Department)
Zoning Board of Appeals	Yes	The ZBA is a five-member board of City residents responsible for the review of variances and appeals related to the Zoning Code.





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planning Department		<p>The department plays a key role facilitating communication between departments, coordinating policy and investment decisions to maximize positive impact, assisting other departments with grant development and project management, and working closely with residents, community groups, the private sector, and all levels of governments on shared goals to achieve a more sustainable and livable community.</p> <p>The department provides a broad range of services to city residents, property owners, business owners, developers, elected officials, and other city departments. Among the services offered are: site plan review; neighborhood planning; long-range planning; historic preservation; environmental planning and climate change; community design and amenity/quality of life; information management (i.e., mapping); grants development and administration; and zoning administration, compliance, and enforcement.</p> <p>There are three divisions within the Planning Department: the Planning Division, the Historic Preservation Division, and the Zoning Administration & Enforcement Division.</p>
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	<p>The Shade Tree Commission is an advisory board for the City of Binghamton that is charged with studying the problems and determining the needs of the City of Binghamton in connection with its tree planting programs. The Commission is also responsible for helping the Parks and Recreation Department decide what type of trees will be planted in the City each year, and for assisting with the dissemination of news and information regarding selection, planting, and maintenance of trees within the City limits. In addition, the Commission serves as an advisory body to the Planning Commission, Zoning Board of Appeals, and City departments providing reviews and recommendations on private development projects and for public projects .</p>
Open Space Board/Committee	Yes	<p>The Commission on Architecture and Urban Design (CAUD) was established in 1964 to prevent the deterioration of property belonging to the City or property in which any City funds are involved and to advise builders or designers in regard to the use of space and the design of structures and to encourage protection of economic values and proper and appropriate use of surrounding areas.</p> <p>The Commission on Architecture and Urban Design is responsible for reviewing and approving any project which alters the exterior appearance of any designated Local Landmark historic building and all buildings within the boundaries of designed Historic Districts. Any person seeking to carry out such a project must complete a Design Review Application. The Commission is also responsible for</p>



SECTION 9.3. City of Binghamton

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		determining the historic significance of buildings in the City of Binghamton.
Economic Development Commission/Committee	Yes	The Binghamton Local Development Corporation provides low-interest microenterprise, facade, and revolving fund loans to support business growth through property acquisition, start-up and expansion.
Public Works/Highway Department	Yes	The City of Binghamton Department of Public Works, with a staff of 91 employees, is responsible for providing road maintenance of over 150 centerline miles of pavement, refuse collection, street lighting, City-owned buildings and grounds maintenance, including vacant property maintenance, fleet management of more than 300 vehicles, and traffic signals, traffic signs and traffic markings maintenance
Construction/Building/Code Enforcement Department	Yes	The Office of Building, Construction & Code Enforcement promotes and enforces general compliance with the laws and regulations that govern the planning, development, construction, operation, and demolition of structures. Office staff is comprised of NY State-certified code officials who provide a broad range of public services, including: compliance enforcement and complaint resolution; planning and design development, building construction permitting and trade licensing.
Emergency Management/Public Safety Department	Yes	The City has a Police Department and a Fire Department.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	<p>The City of Binghamton Department of Public Works, with a staff of 91, is responsible for providing the following services:</p> <ul style="list-style-type: none"> • Road maintenance of over 150 centerline miles of pavement • Paving operations • Pothole repair • Snow and ice removal • Street cleaning • Refuse collection • Garbage • Trash • Recycling • White goods (large appliances) and metal • Yard waste collection • Street lighting • City-owned buildings and grounds maintenance, including vacant property maintenance • Fleet management of more than 300 vehicles • Traffic signals, Traffic signs and traffic markings maintenance
Mutual aid agreements	Yes	Agreements with Broome municipal and County law enforcement agencies and fire departments.
Human Resources Manual - Do any job descriptions specifically include identifying	No	-





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
or implementing mitigation projects or other efforts to reduce natural hazard risk?		
Other	Yes	Flood Committee: Planning Commission acts as Floodplain Manager Meets Monthly Planning Department
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	The City has both a Planning and Engineering Department, as well as a Planning Commission.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering Department: The City of Binghamton Engineering Department provides a full range of engineering services to the taxpayers, the Mayor, City Council, and to all other departments within City Hall. In addition to the engineering services, the department fulfills many regulatory, planning and service functions. The Department's mission is to contribute to the City's revitalization by keeping the roadways, water and sewer systems and parks safe, while at the same time, keeping the city landscape aesthetically pleasing.
Planners or engineers with an understanding of natural hazards	Yes	The Planning Department, Engineering Department, and Department of Public Works all have an understanding of natural hazards and integrate natural hazard knowledge in the performance of their duties.
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Office of Building and Code Enforcement and Engineering Department.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Staff in the Planning and Engineering Departments have training in GIS. The city also has shared services agreement with Broome County GIS.
Environmental scientist familiar with natural hazards	Yes	Staff in the Planning and Engineering Departments
Surveyor(s)	Yes	Engineering Department staff.
Emergency Manager	Yes	Mayor
Grant writer(s)	Yes	Planning Department staff.
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Stormwater Engineer

Fiscal Capability

Table 9.3-5 summarizes financial resources available to the City of Binghamton.





Table 9.3-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes
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	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.3-6 summarizes the education and outreach resources available to the City of Binghamton.

Table 9.3-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	Mayor’s Office
Personnel skilled or trained in website development	Yes	Information Management & Technology is trained in web design.
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Planning Commission, Zoning Board of Appeals
Warning systems for hazard events	Yes	National Service
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.3-7 summarizes classifications for community programs available to the City of Binghamton.





Table 9.3-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4	2012
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	1	2017
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	YES	-	10/2023
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.3-8 summarizes the adaptive capacity for each identified hazard of concern and the City’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 9.3-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.3.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.3-1 is responsible for maintaining this information.





National Flood Insurance Program (NFIP) Summary

Table 9.3-9 summarizes the NFIP statistics for the City of Binghamton.

Table 9.3-9. City of Binghamton NFIP Summary of Policy and Claim Statistics

# Policies	255
# Claims (Losses)	255
Total Loss Payments	\$313,164
# Repetitive Loss Properties (NFIP definition)	45
# Repetitive Loss Properties (FMA definition)	7
# Severe Repetitive Loss Properties	2
# RL/SRL Properties Within the 1% Annual Chance Flood Boundary	36
# RL/SRL Properties Within the 0.2% Annual Chance Flood Boundary	42

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.

Flood Vulnerability Summary

Table 9.3-10 provides a summary of the NFIP program in the City of Binghamton.

Table 9.3-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Flooding occurs along low-lying areas.
Do you maintain a list of properties that have been damaged by flooding?	Yes, City maintains a list.
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	People on Court Street were interested in selling but the property appraisals received were too low. We have not conducted a survey regarding flood mitigation needs/interests.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	None identified from FEMA ARCGIS tool.
How do you make Substantial Damage determinations?	FEMA representative or Insurance Adjusters.





NFIP Topic	Comments
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Unknown at this time.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	Over 50 acquired.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes, for the most part, we have a lot of localized creek flooding that isn't accounted for.
NFIP Compliance	
What local department is responsible for floodplain management?	Planning Department.
Are any certified floodplain managers on staff in your jurisdiction?	None certified.
Do you have access to resources to determine possible future flooding conditions from climate change?	FEMA and National Weather Service; DEC Floodplain Management, USACE.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Possibly.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	City Code, Chapter 240 is the City's Flood Damage Prevention ordinance. Tracks compliance with development, floodplain development permit is required for projects within the floodplain, Planning Commission review and approval required.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	§ 240-2. Definitions. SUBSTANTIAL IMPROVEMENT A. Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either: (1) Before the improvement or repair is started; or (2) If the structure has been damaged and is being restored before the damage occurred.
What are the barriers to running an effective NFIP program in the community, if any?	Funding for projects and staff.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown.
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 240 Flood Damage Prevention
What is the date that your flood damage prevention ordinance was last amended?	March 6, 2019
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets the following: ♦ Regulations to prohibit development in high-hazard areas. ♦ Building codes requiring flood-resistant construction for new buildings in flood prone areas. ♦ Acquisition and relocation of buildings in high hazard areas. ♦ Modifying or retrofitting existing buildings. ♦ Controlling stormwater runoff.



NFIP Topic	Comments
	◆ Providing self-help advice to property owners
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Ch 227 Erosion Control Ch 410 Zoning – site plan review for lot coverage max, shade tree requirements, parking lot requirements.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Yes, we are very interested.

9.3.5 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 9.3-11 through Table 9.3-13.

Table 9.3-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	1	0	1	2
Permits within SFHA	0	0	0	0
2020				
Total Permits	1	0	1	2
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	2	2
Permits within SFHA	0	0	1	1
2023				
Total Permits	0	0	3	3
Permits within SFHA	0	0	1	1

SFHA Special Flood Hazard Area (1% flood event)





Table 9.3-12. Recent Major Development and Infrastructure from 2018 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
Dorchester Park Gateway	Other	Recreation	78 Prospect Street	Yes	Completed.

* Only location-specific hazard zones or vulnerabilities identified.

Table 9.3-13. 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
Building A Front Street Residences and Building B Oak Street Residences	Residential	Building A 76 units; Building B 80 Units	191 Front Street Binghamton, NY 13901	No	Approved.
The Metro Group Housing Project	Mixed Use	102 apartments with ground floor Commercial space.	187 Clinton Street Binghamton, NY 13905	Yes	Anticipated, no approval.
Metro Group Housing Project	Mixed Use	102 low-mod income units	187 Clinton Street	Yes	Anticipated, no approval.
Veterans Center	Commercial	1	530 State Street	Yes	Approved.

* Only location-specific hazard zones or vulnerabilities identified.

9.3.6 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 City of Binghamton risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the City are shown in Figure 9.3-1 through Figure 9.3-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which Binghamton has significant exposure.





Figure 9.3-1. City of Binghamton Flood Hazard Area Extent and Location Map

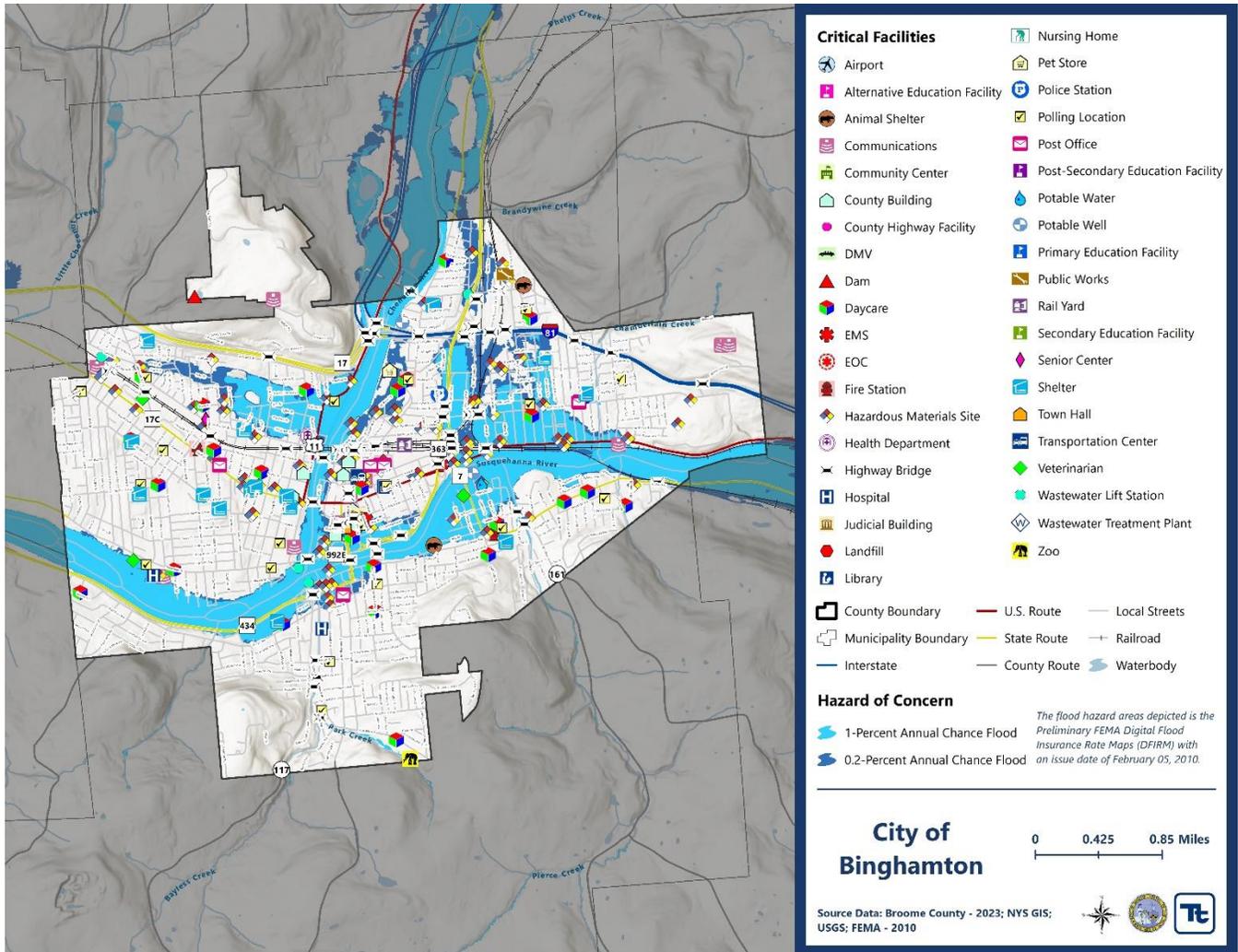
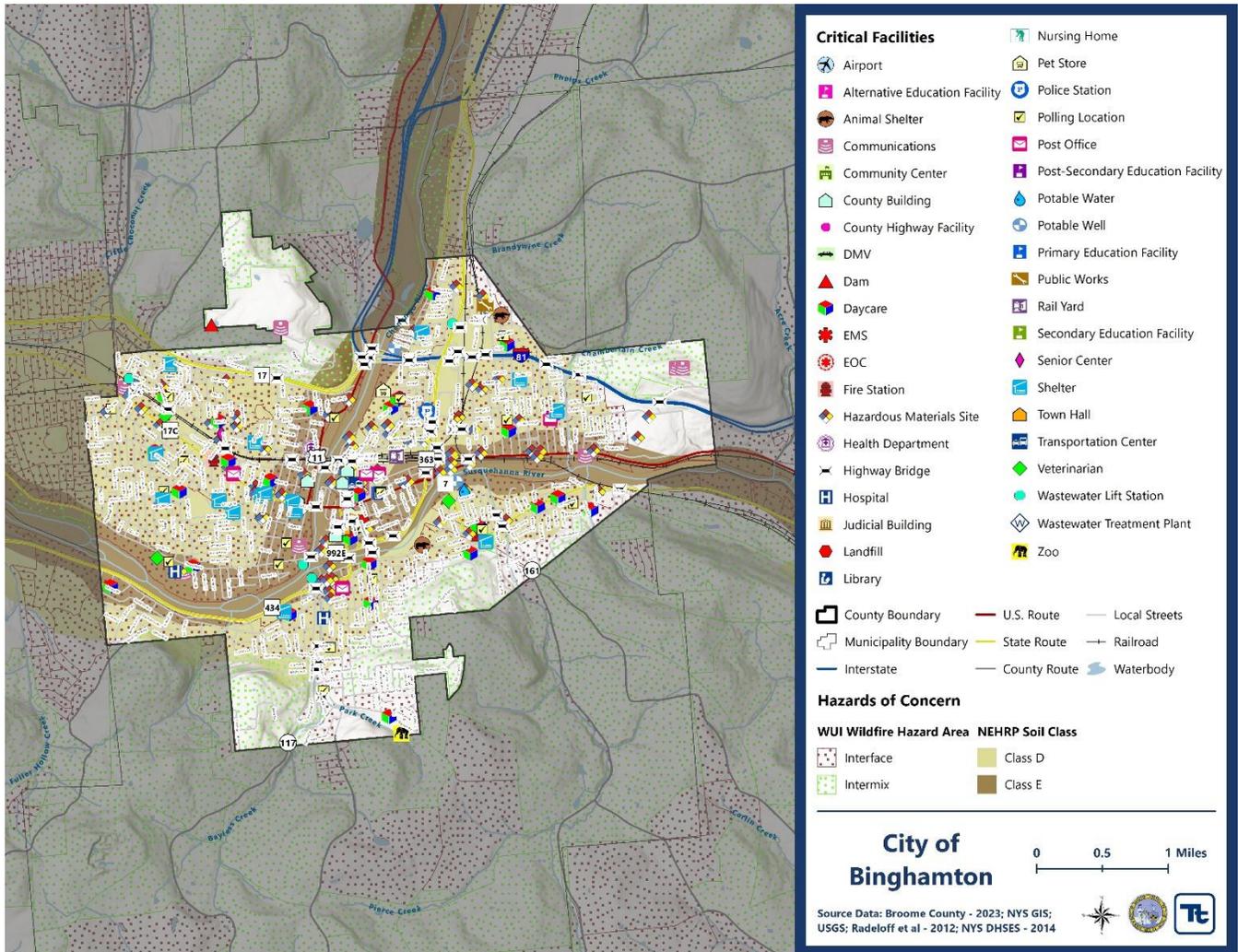




Figure 9.3-2. City of Binghamton Flood Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the City of Binghamton is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.3-14 provides details on loss and damage in the City during hazard events since the last hazard mitigation plan update.

Table 9.3-14. Hazard Event History in the City of Binghamton

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the City
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, Colesville areas; the tornado caused \$15,000 in property damages.	The City experienced downed trees and powerlines.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The City followed social distancing requirements and mandatory masking protocol.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The City experienced flooding impacts.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	The City experienced snow impact to critical facilities.

Notes:
EM Emergency Declaration (FEMA)



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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes presents key risk assessment results for the City of Binghamton.

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. Binghamton reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community.

Table 9.3-15 shows Binghamton’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.3-15. Hazard Ranking

Hazard	Rank
Dam/Levee	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.3-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.3-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Communications_7	Communications	N	Y	2024-BinghamtonC-05	-
Communications_9	Communications	N	Y	2024-BinghamtonC-05	-
State Office Building Tower Site	Communications	N	Y	2024-BinghamtonC-05	-
City of Binghamton Headquarter	Fire Station	N	Y	2024-BinghamtonC-05	-
BARRETT PAVING MATERIALS INC	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
BARTHOLOMEW'S CAR CARE CENTER LLC	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
DOUBLETREE BY HILTON BINGHAMTON NY	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
JANACO INC	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
KWIK FILL A0011-025	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
MIRABITO #75	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
OUR LADY OF LOURDES MEMORIAL HOSPITAL INC	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
SPRINT POP	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
UNITED HEALTH SERVICES	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
VACRI CONSTRUCTION CORP	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
WATER TREATMENT PLANT	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
WEITSMAN RECYCLING LLC - BINGHAMTON DIVISION	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
Binghamton Co-Generation Plant	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-



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Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Binghamton Facility	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
Broome County Cold Storage	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
OUR LADY OF LOURDES HOSPITAL	Hospital	N	Y	2024-BinghamtonC-05	-
Binghamton Police Station	Police Station	N	Y	2024-BinghamtonC-05	-
Binghamton City Treatment Plant	Potable Water	N	Y	2024-BinghamtonC-05	-
Anitec Image Corporation	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
Former Stow Manufacturing	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
NYSEG - Binghamton Court St. MGP	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
NYSEG - Binghamton Washington St MGP	Hazardous Materials Facility	N	Y	2024-BinghamtonC-05	-
Bevier St Pump Station	Wastewater Lift Station	N	Y	2024-BinghamtonC-05	-
County Office Building	County Building	N	Y	2024-BinghamtonC-05	-
Health Department	Health Department	N	Y	2024-BinghamtonC-05	-
The Arena	County Building	N	Y	2024-BinghamtonC-05	-
Binghamton Fire Ambulance	EMS	N	Y	2024-BinghamtonC-05	-
Binghamton City Hall	Town Hall	N	Y	2024-BinghamtonC-05	-
Southview Post Office	Post Office	N	Y	2024-BinghamtonC-05	-
Binghamton Animal Clinic	Veterinarian	N	Y	2024-BinghamtonC-05	-
Bridge_1003681	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_1003682	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_1031181	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_1031182	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level



Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_2226190	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_3350100	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_3360350	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_7003640	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_7091651	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_7091652	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_7257420	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_7257441	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_7257442	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_7257500	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level
Bridge_336035A	Highway Bridge	N	Y	-	Bridge is built to the 500-year flood level

Source: Broome County, 2023

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

- Finch Hollow Site 3C Dam

Identified Issues

After review of the City of Binghamton’s hazard event history, hazard rankings, hazard location, and current capabilities, the City of Binghamton identified the following vulnerabilities within their community:

- The City of Binghamton has a total of 42 homes that filed flood damage claims to the extent that they qualify as repetitive loss structures under the NFIP.
- Park Creek Channel and Chamberlain Creek banks have been damaged by recent flooding events and would cause flooding if it fails.



- During Tropical Storm Lee, the extent of the flooding overwhelmed and inundated stormwater management infrastructure that had flooded in the past. Electrical equipment required for continuous operation of the system was flooded and damaged. The Emma Street and Glenwood Avenue pump stations, which are located at a railroad underpass, proved to be extremely vulnerable to localized flooding.
- During storm events, the amount of stormwater entering the City's combined system has overwhelmed the regional sewage treatment system and caused the release of untreated or minimally treated effluent into the Susquehanna River. This project would include planning, design, and construction services to remove existing combined sewer infrastructure and replace it with separated storm and sanitary sewer systems.
- The following 34 critical facilities are located in the floodplain:
 - o Communications_7
 - o Communications_9
 - o State Office Building Tower Site
 - o City of Binghamton Headquarter
 - o BARRETT PAVING MATERIALS INC
 - o BARTHOLOMEW'S CAR CARE CENTER LLC
 - o DOUBLETREE BY HILTON BINGHAMTON NY
 - o JANACO INC
 - o KWIK FILL A0011-025
 - o MIRABITO #75
 - o OUR LADY OF LOURDES MEMORIAL HOSPITAL INC
 - o SPRINT POP
 - o UNITED HEALTH SERVICES
 - o VACRI CONSTRUCTION CORP
 - o WATER TREATMENT PLANT
 - o WEITSMAN RECYCLING LLC - BINGHAMTON DIVISION
 - o Binghamton Co-Generation Plant
 - o Binghamton Facility
 - o Broome County Cold Storage
 - o OUR LADY OF LOURDES HOSPITAL
 - o Binghamton Police Station
 - o Binghamton City Treatment Plant



- Anitec Image Corporation
- Former Stow Manufacturing
- NYSEG - Binghamton Court St. MGP
- NYSEG - Binghamton Washington St MGP
- Bevier St Pump Station
- County Office Building
- Health Department
- The Arena
- Binghamton Fire Ambulance
- Binghamton City Hall
- Southview Post Office
- Binghamton Animal Clinic

The City's Fire Station Headquarters and fleet have relocated to 235 Court Street which is not in the floodplain and was not impacted by any of the city's previous floods.

- Four of the City Fire Stations do not have back-up power to run the facilities in the event of a power outage. A generator is needed to power the facilities and allow continuity of operations for the fire station. Currently, Four generators have been purchased, one is in progress.
- During Tropical Storm Lee, vulnerable populations were displaced from their homes for extended periods of time due to the failure of utility systems serving the buildings in which they resided. This negatively affected the residents themselves and the health and social service providers who assist them.
- Existing FIRM maps are outdated.
- Storm and sanitary lines must be separated where possible to prevent overflow.
- Excessive amounts of impervious surface throughout the City contribute to localized flooding. A residential and commercial program was completed but ran out of funding.
- Storm sewer outfall on Ball Ave was prevented from any further discharge into Chenango River. The drainage area from the Town of Dickinson and the Town of Kirkwood aggravated the storm water damage along State Street.
- Joint sewage treatment plant requires flood protection.
- Sullivan Fire Training Facility is prone to flooding.



9.3.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.3-17 indicates progress on the City'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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.3-17, the City of Binghamton identified that the mitigation actions identified in Table 9.3-17 are comprehensive of mitigation measures needed to secure the city from flood damages now and in the future.

Since the adoption of the County's first HMP, the City of Binghamton has made significant mitigation progress in the following areas:

- Storm/Sewer separation and localized onsite water retention.



Table 9.3-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
C. Binghamton-1	Repetitive Loss Properties in City	Flood	City Floodplain Administrator working with property owners	The City of Binghamton has a total of 42 homes that filed flood damage claims to the extent that they qualify as repetitive loss structures under the NFIP. Continue working with homeowners to acquire or elevate their homes.	<ol style="list-style-type: none"> 1. In Progress. 2. Research and development plan in progress. 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to work with the homeowners to acquire or elevate their homes. 3. N/A
C. Binghamton-2	Park Creek Channel and Chamberlain Creek improvements	Flood	City of Binghamton Highway and Engineer	<p>Park Creek Channel and Chamberlain Creek banks have been damaged by recent flooding events and would cause flooding if it fails.</p> <p>Chamberlain Creek - Increase culverts along Court Street, I-86, Robinson Street, and Woodcock Street.</p> <p>Park Creek – increase culverts along Cross Street, Vestal Avenue, Park Avenue, Morris Street, and Hotchkiss Street.</p> <p>In addition, extend the concrete channel by increasing the height or adding additional earthen berms.</p>	<ol style="list-style-type: none"> 1. In Progress. 2. HMGP funding acquired, workplan in progress, budget amendment pending. 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to work on improving Park Creek Channel and Chamberlain Creek. Currently there is a workplan in progress to increase the culverts along Cross Street, Vestal Avenue, Park Avenue, Morris Street, and Hotchkiss Street near Park Creek. Additionally, the City will extend the concrete channel in this area by increasing the height through additional earthen berms. There is also a workplan in progress to increase culverts along Court Street, I-86, Robinson Street, and Woodcock Street near



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Install a storage/retaining pond upstream from both creeks. One would be located by Chamberlain Creek and Park Creek.		Chamberlain Creek. The City will also install a storage retention pond upstream of both Chamberlain Creek and Park Creek for additional flood mitigation. 3. N/A
C. Binghamton-3	Scatter Site Stormwater Infrastructure	Flood, Severe Storm	City of Binghamton Highway and Engineer	During Tropical Storm Lee, the extent of the flooding overwhelmed and inundated stormwater management infrastructure that had flooded in the past. Electrical equipment required for continuous operation of the system was flooded and damaged. The Emma Street and Glenwood Avenue pump stations, which are located at a railroad underpass, proved to be extremely vulnerable to localized flooding. This project would provide design and construction services to introduce flood resistance and resiliency for the power supply, operational equipment, primary structure, and physical access at the	1. In Progress. 2. N/A	1. Include in 2024 HMP. 2. The City will continue to provide design and construction services to introduce flood resistance and resiliency for power supply, operational equipment, primary structure, and physical access at the Rush Avenue, Moeller Street, Emma Street, and Glenwood pump stations. Some elements the project may include depending on the design are, elevation of equipment above base flood elevation, waterproofing electrical panels to withstand flooding, or relocation of electrical panels outside the floodplain. Upon completion of this project, the pump stations will be flood proofed to minimize floodwater infiltration



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				<p>Rush Avenue, Moeller Street, Emma Street, and Glenwood Avenue pump stations. Depending on site-specific conditions, the project could include elevating equipment and other components above the base flood elevation, waterproofing electrical panels to withstand being fully submerged, or relocating the panels and other equipment out of the floodplain. The pump station buildings would be flood-proofed to minimize floodwater infiltration and damage to components inside</p>		<p>and damage to the electrical components. 3. N/A</p>
C. Binghamton-4	Front Street Stormwater Separation Project	Flood, Severe Storm	City of Binghamton Highway and Engineer	<p>During storm events, the amount of stormwater entering the City’s combined system has overwhelmed the regional sewage treatment system and caused the release of untreated or minimally treated effluent into the Susquehanna River. This project would include</p>	<ol style="list-style-type: none"> 1. In Progress. 2. As of April 2014, the project’s design was 75% complete. 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to work on removing existing combined sewer infrastructure and replacing it with a separated storm and sanitary sewer system. The City will work to integrate this with the Front Street Gateway project to reconstruct Front Street.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				<p>planning, design, and construction services to remove existing combined sewer infrastructure and replace it with separated storm and sanitary sewer systems.</p> <p>This project would be integrated with the Front Street Gateway project, a City-led effort to reconstruct Front Street, including new curbs, sidewalks, and landscaping, that is designed to identify Front Street as one of the gateways into Binghamton. Although the Front Street Gateway project is being funded by the U.S. Federal Highway Administration, the separation of the combined sewers is not eligible for this funding source. The City anticipates that this project will be bid in mid-2014, with construction starting and ending in 2015. As of April 2014, the project's design was 75% complete.</p>		<p>3. N/A</p>



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
C. Binghamton-5	Critical Facilities in Floodplain	Flood	City Floodplain Administrator with support from facility operators	The City's police, fire, EMS, and city hall (38 Hawley St) are located in the floodplain and susceptible to flood damage. These departments are all critical in the event of an emergency or natural hazard event. Separate the police and fire/EMS into individual buildings outside of the floodplain. City government departments will remain in 38 Hawley St facility. Remove mechanicals and electrical equipment from basement to first floor or roof. Multiple vacant properties throughout the City that would be sufficient to relocate police and fire/EMS.	<ol style="list-style-type: none"> In Progress. The City's Fire Station Headquarters and fleet have relocated to 235 Court Street which is not in the floodplain and was not impacted by any of the city's previous floods. 	<ol style="list-style-type: none"> Include in 2024 HMP. The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station Headquarters and fleet have been relocated outside of the floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement. N/A
C. Binghamton-6	Generators for Fire Stations	All Hazards	City Fire Department	Four of the City Fire Stations do not have back-up power to run the facilities in the event of a power outage. A generator is needed to power the facilities and allow continuity of operations for the fire station.	<ol style="list-style-type: none"> In Progress. Four generators have been purchased; one is in progress. 	<ol style="list-style-type: none"> Include in 2024 HMP. The City will work to purchase the last of the five generators for the City Fire Stations, to allow for backup power during hazard events and power outages. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Engineering design and procurement of stationary generators to be install at the fire stations to provide and uninterrupted power supply.		
C. Binghamton-7	Exchange Street Housing Flood Resistance	Flood, Severe Storm	Binghamton Housing Authority	During Tropical Storm Lee, vulnerable populations were displaced from their homes for extended periods of time due to the failure of utility systems serving the buildings in which they resided. This negatively affected the residents themselves and the health and social service providers who assist them. This project will provide feasibility study, design, and construction services for resilient and flood-resistant infrastructure within existing high-rise and multi-story housing structures (three publicly subsidized housing complexes and a women's homeless shelter). The project would relocate critical systems (e.g., standard power, emergency power, heating, ventilation and air	<ol style="list-style-type: none"> 1. In Progress. 2. BHA requesting estimates. 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to explore funding availability and contracting opportunities to relocate critical systems (ex. air condition, potable water, etc.) above the base flood elevation to protect against severe storms and flooding. 3. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				conditioning, and potable water) above flood elevation.		
C. Binghamton-8	Assist in the update of flood plain (FIRM) maps - Jurisdictional Level	Flood	City working with Broome County	Existing maps are outdated. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC and USGS; and identification of flood-prone areas outside of currently designated areas	<ol style="list-style-type: none"> In Progress. N/A 	<ol style="list-style-type: none"> Include in 2024 HMP. The City will continue to assist FEMA in the updating of the City FIRM maps to provide accurate floodplain estimates. N/A
C. Binghamton-9	Initiate participation in the CRS	Flood	Floodplain Manager; Town Engineer; Town Planner/ NYSDEC, NYSFSMA, FEMA / NYSOEM	Flood insurance premiums will rise, and more properties will require insurance once new FIRMS are adopted. CRS offers an opportunity to reduce premiums for City residents. City will go through the process to enroll in the Community Rating System.	<ol style="list-style-type: none"> Completed Along with the Climate Action Plan Update 2024 the city is finalizing the CRS level determination, target is CRS class 4-5. 	<ol style="list-style-type: none"> Discontinue. N/A Completed.
C. Binghamton-10	Upgrade flood protection infrastructure in low elevation areas including increased drain	Flood	City DPW, USACE	Localized flooding in low elevation locations largely the result of infrastructure failure. Flood walls will be certified and drain lines will be increased.	<ol style="list-style-type: none"> Ongoing Capability N/A 	<ol style="list-style-type: none"> Discontinue. N/A Ongoing capability for flood wall maintenance.



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	lines and obtaining flood wall certification					
C. Binghamton-11	Continue and enhance ongoing storm sewer and sanitary sewer separation to assist with peak storm water flows.	Flood	City DPW	Storm and sanitary lines must be separated where possible to prevent overflow. Currently focusing on Westside Sewer Separation project – Bennett Ave, Laurel, Lathrop, Johnson, Millard.	<ol style="list-style-type: none"> In Progress. Challenges with funding availability. 	<ol style="list-style-type: none"> Include in 2024 HMP. The City will explore funding options to enhance the Westside Sewer Separation system (Ave, Laurel, Lathrop, Johnson, and Millard areas) as well as Conklin Town line to Jackson Street where existing stormwater sewer lines are inadequate. Once funding is secured, the City will implement the most feasible project to mitigate and assist with peak storm water flows. N/A
C. Binghamton-12	Pursue funding to continue replacing interceptor/trunk sewer line from Conklin town line to Jackson St, focusing on the section between Duke St and Tompkins St, to	Flood	City DPW	Existing line is inadequate The City will pursue funding	<ol style="list-style-type: none"> In Progress. Challenges with funding availability. 	<ol style="list-style-type: none"> Include in 2024 HMP. The City will explore funding options to enhance the Westside Sewer Separation system (Ave, Laurel, Lathrop, Johnson, and Millard areas) as well as Conklin Town line to Jackson Street where existing stormwater sewer lines are inadequate. Once funding is



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	assist in managing peak storm water flows.					<p>secured, the City will implement the most feasible project to mitigate and assist with peak storm water flows. Emphasis will be placed on Duke Street to Tompkin Street.</p> <p>3. N/A</p>
C. Binghamton-13	Pursue additional funding to continue and expand City's Stormwater Green Infrastructure 50/50 Fund, which will cover a portion of eligible installation costs on private property of green infrastructure that assists with stormwater management goals.	Flood	City of Binghamton	Excessive amounts of impervious surface throughout the City contribute to localized flooding. A residential and commercial program was completed but ran out of funding. Continue to open additional green space to increase natural absorption of Stormwater.	<ol style="list-style-type: none"> 1. In Progress. 2. GIGP funds were awarded to the city for streetscape improvements reducing storm water runoff in Downtown Binghamton along State Street, between Henry Street and Lewis Street, including corner sections of those two streets (completed 2023). Green infrastructure design and installation will begin on PHASE II Washington Street between Henry 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will begin implementing Phase II of the Green Infrastructure design and installation on Washington Street, between Henry Street and Lewis Street. 3. N/A



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					Street and Lewis Street in 2024.	
C. Binghamton-14	Conduct engineering feasibility study to explore mitigation efforts for State Street Neighborhood off Brandywine Highway	Flood	City; NYS DOT; County; Town of Dickinson; Village of Port Dickinson	Storm sewer outfall on Ball Ave was prevented from any further discharge into Chenango River. The drainage area from the Town of Dickinson and the Town of Kirkwood aggravated the storm water damage along State Street. The storm sewer pipe should be increased, and a flap gate installed at the Chenango River. Buyout of properties along State Street.	<ol style="list-style-type: none"> In Progress. Challenges funding availability 	<ol style="list-style-type: none"> Include in 2024 HMP. The City will continue to work on increasing the storm sewer pipe along Ball Ave and installation of A flap gate at the outfall into the Chenango River. Additionally the City will conduct buyout of properties along State Street. N/A
C. Binghamton-15	Create official liaison between City and Army Corps to ensure regular maintenance and inspections on the local flood control structures that currently protect downtown	Winter Storm	City DPW	Local flood control structures require maintenance The City will establish an official liaison between City and Army Corps to ensure regular maintenance and inspections on the local flood control structures that currently protect downtown Binghamton, the First Ward,	<ol style="list-style-type: none"> Ongoing Capability. The City Engineering, Planning, Parks and Public Works have established regular communication with DEC/ACE regarding flood wall maintenance and inspections. 	<ol style="list-style-type: none"> Discontinue N/A Ongoing capability to conduct flood wall maintenance and inspections.



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	Binghamton, the First Ward, the south side and east side neighborhoods.			the south side and east side neighborhoods.	Flood wall maintenance resulting from official inspection is ongoing.	
C. Binghamton-16	Collaborate with JSTP on implementation of I/I offset program.	Flood	City/JC/JSTP	Joint sewage treatment plant requires flood protection. Flood wall will be improved	1. In Progress. 2. N/A	1. Include in 2024 HMP. 2. The City will work to improve the flood walls at the Joint Sewage Treatment Plan. 3. N/A
C. Binghamton-17	Install one-way valve in the floor drain of mechanics shop to prevent floor water from entering shop and damaging equipment and vehicles at Sullivan Fire Training Facility	Flood	City	Sullivan Fire Training Facility is prone to flooding. Install one-way valve in the floor drain of mechanics shop	1. In Progress. 2. Cost estimate and workplan developed.	1. Include in 2024 HMP. 2. The City will carry out the workplan to install one-way valve in the floor drain of the mechanic shop and purchase two door dams to minimize flood water entry into the classroom within the Sullivan Fire Training Facility. 3. N/A
C. Binghamton-18	Purchase two door dams to minimize flood water entry to F.D. classroom preventing damage to classroom contents at	Flood	City	Sullivan Fire Training Facility is prone to flooding. Purchase two door dams to minimize flood water entry to F.D. classroom preventing damage to classroom contents at Sullivan Fire Training Facility	1. In Progress. 2. Cost estimate and workplan developed.	1. Include in 2024 HMP. 2. The City will carry out the workplan to install one-way valve in the floor drain of the mechanic shop and purchase two door dams to minimize flood water entry into the



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Sullivan Fire Training Facility					<ul style="list-style-type: none"> classroom within the Sullivan Fire Training Facility. 3. N/A
C. Binghamton-19	Conduct and facilitate community and public education and outreach for residents and businesses.	Flood	Municipality with support from Planning Partners, BCPD, NYSOEM, FEMA	<p>Public must be made better aware of risks and resources. Outreach to include, but not be limited to, the following to promote and effect natural hazard risk reduction:</p> <ul style="list-style-type: none"> •Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. •Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. •Use email notification systems and newsletters to 	<ul style="list-style-type: none"> 1. Completed 2. On city's Climate Resilience page post link to BCHMP website, information on flood insurance, and hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information. 	<ul style="list-style-type: none"> 1. Discontinue 2. N/A 3. Completed



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				better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.		
C. Binghamton-20	Obtain and archive elevation certificates	Flood	NFIP Floodplain Administrator	No central database of elevation certificates Obtain and archive elevation certificates	<ol style="list-style-type: none"> Ongoing Capability Building Code & Construction will review elevation certification requirements. 	<ol style="list-style-type: none"> Discontinue. N/A The Building Code and Construction Department will continue to upload Elevation Certificates during the review and evaluation process.
C. Binghamton-21	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in	Severe Storm	Municipality with support from County, NYSOEM and FEMA	The City currently does not participate in the program. Participation in the NOAA "StormReady" program shall include providing information on the "StormReady" program, facilitating public outreach and awareness programs, and supporting community storm risk	<ol style="list-style-type: none"> Completed The City resiliency initiatives include our designation as a Clean Energy Community, we are in the process of becoming a Climate Smart Community and 	<ol style="list-style-type: none"> Discontinue. N/A Completed in Fall of 2023.



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	joining the program.			reduction activities as appropriate. Specific actions addressed by "StormReady" participation include establishing a 24-hour Warning Point, increase number of ways EOC receives NWS warnings, increase number of ways to disseminate warnings, monitoring hydrometeorological data, providing annual weather safety talks, train weather spotters, create a formal hazardous weather plan, host annual visits by NWS to communities, etc.	anticipate a Bronze Certification Fall 2023 and have begun the process of joining the StormReady program. We are completing the update of our GHG 2006 Inventory and are finishing our Climate Action Plan update, both will be completed Fall 2023.	
C. Binghamton-22	Obtain training and conduct rapid screening assessment of critical facilities for earthquake vulnerability.	Earthquake	Municipal Emergency Management, Fire, PD with support from County, NYSOEM	Staff need training. Train staff to conduct rapid screening assessment of critical facilities.	<ol style="list-style-type: none"> Ongoing Capability. Community safety education. 	<ol style="list-style-type: none"> Discontinue N/A Completed and ongoing – the City will continue to implement community safety education and training courses for City staff.
C. Binghamton-23	Develop a post-earthquake management plan to address	Earthquake	Municipal Emergency Management, Fire, PD with	There is no current plan. Develop post-earthquake management plan to allow	<ol style="list-style-type: none"> Completed. Verification within Emergency Response Plan. 	<ol style="list-style-type: none"> Discontinue. N/A



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	building safety inspections, gas leaks, and other elements to protect public safety.		support from County, NYSOEM	staff to safely conduct inspections.		3. Earthquake management is included in the City Emergency Response Plan.
C. Binghamton-24	Protect the Telecommunications Tower to the 500-year flood level.	Flood	City floodplain administrator, facilities manager	The facility is in the 100-year floodplain. The City does not have jurisdiction over the facility and cannot mitigate themselves. The City will contact the facilities manager and discuss options for protecting the facility to the 500-year level	<ol style="list-style-type: none"> 1. In Progress. 2. Telecommunication Tower locations under review include 57 Whitney Ave and 38 Hawley St. 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station Headquarters and fleet have been relocated outside of the floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement. 3. N/A
C. Binghamton	Protect the City of Binghamton	Flood	Fire Department	The facility is in the 100-year floodplain.	<ol style="list-style-type: none"> 1. In Progress. 	<ol style="list-style-type: none"> 1. Include in 2024 HMP.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
mton-25	Engine 4 to the 500-year flood level.			The City will contact the facilities manager and discuss options for protecting the facility to the 500-year level	2. Workplan in development.	2. The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station Headquarters and fleet have been relocated outside of the floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement. 3. N/A
C. Binghamton-26	Protect the City of Binghamton Engine 4 to the 500-year flood level.	Flood	Fire Department	The facility is in the 100-year floodplain. The City will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	1. In Progress.	1. Include in 2024 HMP. 2. The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station Headquarters and fleet have been relocated outside of the



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						<p>floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement.</p> <p>3. N/A</p>
C. Binghamton-27	Protect Macarthur Elementary School to the 500-year level.	Flood	City floodplain administrator, facilities manager	The facility serves as a school and a shelter and is in the 100-year floodplain. The school is not under City jurisdiction. The City will contact the facilities manager and discuss options for protecting the facility to the 500-year level	<ol style="list-style-type: none"> 1. Completed 2. School rebuilt to meet all current flood proof requirements. 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Completed.
C. Binghamton-28	Protect Susquehanna River Intake to the 500-year level.	Flood	City floodplain administrator, facilities manager	The facility is in the 100-year floodplain. The City will contact the facilities manager and discuss options for protecting the facility to the 500-year level	<ol style="list-style-type: none"> 1. In Progress. 2. Developing cost estimate to elevate mechanicals and electrical items; flood proof building. 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						<p>Headquarters and fleet have been relocated outside of the floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement.</p> <p>3. N/A</p>
C. Binghamton-29	Protect Front Street Pump Station to the 500-year level.	Flood	City floodplain administrator, facilities manager	The facility is in the 100-year floodplain. Raise all electrical system controls above the 500-year flood level.	<ol style="list-style-type: none"> 1. In Progress. 2. N/A 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station Headquarters and fleet have been relocated outside of the floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						<p>flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement.</p> <p>3. N/A</p>
C. Binghamton-30	Protect Pennsylvania Ave Pump Station to the 500-year level.	Flood	City floodplain administrator, facilities manager	The facility is in the 100-year floodplain. Raise all electrical system controls above the 500-year flood level.	<ol style="list-style-type: none"> 1. In Progress. 2. N/A 	<ol style="list-style-type: none"> 1. Include in 2024 HMP. 2. The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station Headquarters and fleet have been relocated outside of the floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						3. N/A
C. Binghamton-31	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	The current flood damage prevention ordinance (1987) does not include NYS freeboard requirements. Flood Damage Prevention Ordinance will be updated to	<ol style="list-style-type: none"> 1. Ongoing Capability. 2. Updated 3/6/2019. 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Completed.



Proposed Hazard Mitigation Initiatives for the HMP Update

Binghamton participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included review of the following FEMA documents:

- 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 Binghamton 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 the City’s priorities.

Table 9.3-18 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. Table 9.3-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.3-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure		X								X
Disease Outbreak		X								X
Drought		X								X
Earthquake		X								X
Extreme Temperature		X								X
Flood	X	X	X	X	X	X		X	X	X
Invasive and Nuisance Species		X								X
Severe Storm		X	X	X	X	X		X	X	X
Sever Winter Storm		X								X
Wildfire		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 9.3-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-BinghamtonC-01	Residential Repetitive Loss Properties	1	1	0	1	1	0	1	0	1	1	1	1	1	1	11	High
2024-BinghamtonC-02	Park Creek Challen and Chamberlain Creek Improvements	0	1	1	1	1	1	1	1	0	0	1	1	1	1	11	High
2024-BinghamtonC-03	Scatter Site Stormwater Infrastructure	1	1	1	1	1	1	0	1	0	1	1	1	1	1	12	High
2024-BinghamtonC-04	Front Street Stormwater Separation Project	1	1	1	1	1	1	0	1	0	1	1	1	1	1	12	High
2024-BinghamtonC-05	Critical Facilities in Floodplain	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High
2024-BinghamtonC-06	Generators for City Fire Stations	1	0	1	1	1	1	1	0	0	1	1	1	1	1	11	High
2024-BinghamtonC-07	Exchange Street Housing Flood Resistance	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High
2024-BinghamtonC-08	Updating City FEMA FIRMs	1	1	1	1	1	1	1	0	0	1	1	1	0	1	11	High
2024-BinghamtonC-09	Stormwater Sewer Enhancements	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High
2024-BinghamtonC-10	Stormwater Green Infrastructure Phase II	0	1	1	1	1	1	1	1	1	0	1	1	1	1	12	High
2024-BinghamtonC-11	Stormwater Mitigation on Ball Ave	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High
2024-BinghamtonC-12	Collaborate with JSTP on implementation of I/I offset program.	0	1	1	1	1	1	1	1	0	0	1	1	1	1	11	High
2024-BinghamtonC-13	Sullivan Fire Training Facility Floodproofing	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High

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



Action 2024-BinghamtonC-01. Residential Repetitive Loss Properties

Action Name:	2024-BinghamtonC-01		
Description of the Problem:	The City of Binghamton has a total of 42 homes that filed flood damage claims to the extent that they qualify as repetitive loss structures under the NFIP.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The City will continue to work with the homeowners to acquire or elevate their homes.		
Lead Agency:	City Floodplain Administrator working with property owners		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	BRIC, FMA, HMGP, match from property owners		
Implementation Timeline:	Medium		
Goals Met:	1,2		
Benefits:	Eliminates flood damage to homes and residences, which creating an open space for the municipality and increasing flood storage.		
Mitigation Action Type: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Acquiring homes from the floodplain immediately removes the risk to life and property.		
Impact on Critical Facilities/Lifelines:	Acquiring or elevating structures in the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of 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.		
Impact on Future Development:	Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists.
	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.
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Action 2024-BinghamtonC-02. Park Creek Challen and Chamberlain Creek Improvements

Action Name:	2024-BinghamtonC-02	
Description of the Problem:	Park Creek Channel and Chamberlain Creek banks have been damaged by recent flooding events and would cause flooding if it fails.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will continue to work on improving Park Creek Channel and Chamberlain Creek. Currently there is a workplan in progress to increase the culverts along Cross Street, Vestal Avenue, Park Avenue, Morris Street, and Hotchkiss Street near Park Creek. Additionally, the City will extend the concrete channel in this area by increasing the height through additional earthen berms. There is also a workplan in progress to increase culverts along Court Street, I-86, Robinson Street, and Woodcock Street near Chamberlain Creek. The City will also install a storage retention pond upstream of both Chamberlain Creek and Park Creek for additional flood mitigation.	
Lead Agency:	City of Binghamton Highway and Engineer	
Supporting Agencies:	N/A	
Estimated Cost:	Medium	
Potential Funding Sources:	HMGP, BRIC, CHIPS, operating budget	
Implementation Timeline:	Short	
Goals Met:	3	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
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 Critical Facilities/Lifelines:	Transportation routes are more likely to remain open	
Impact of Capabilities:	The action is likely to result in maintained access for first responders.	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	





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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists.
	Remove roadways near creeks		Roadway cannot be removed
	Raingardens		Raingardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.





Action 2024-BinghamtonC-03. Scatter Site Stormwater Infrastructure

Action Name:	2024-BinghamtonC-03		
Description of the Problem:	During Tropical Storm Lee, the extent of the flooding overwhelmed and inundated stormwater management infrastructure that had flooded in the past. Electrical equipment required for continuous operation of the system was flooded and damaged. The Emma Street and Glenwood Avenue pump stations, which are located at a railroad underpass, proved to be extremely vulnerable to localized flooding.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The City will continue to provide design and construction services to introduce flood resistance and resiliency for power supply, operational equipment, primary structure, and physical access at the Rush Avenue, Moeller Street, Emma Street, and Glenwood pump stations. Some elements the project may include depending on the design are, elevation of equipment above base flood elevation, waterproofing electrical panels to withstand flooding, or relocation of electrical panels outside the floodplain. Upon completion of this project, the pump stations will be flood proofed to minimize floodwater infiltration and damage to the electrical components.		
Lead Agency:	City of Binghamton Highway and Engineer		
Supporting Agencies:	N/A		
Estimated Cost:	Medium		
Potential Funding Sources:	HMPG, BRIC, Annual Budget		
Implementation Timeline:	Medium		
Goals Met:	1		
Benefits:	Less risk of interruption to potable water services.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Vulnerable areas that may otherwise experience a loss of water during heavy rain or flooding will be more likely to retain services.		
Impact on Critical Facilities/Lifelines:	Hydration lifeline is more likely to remain intact.		
Impact of Capabilities:	Maintaining operational water services reduces recovery time and costs.		
Impact on Future Development:	Communities with sound and resilient infrastructure encourage commercial and residential development.		
Climate Change Considerations:	Consideration should be taken regarding the increase in heavy rain and flood events as a result of climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





SECTION 9.3. City of Binghamton

	No Action	Problem persists.
	Remove pump stations	Not feasible, not an option, loss of service.
	Install solar panel	Still at risk to flooding.





Action 2024-BinghamtonC-04. Front Street Stormwater Separation Project

Action Name:	2024-BinghamtonC-04	
Description of the Problem:	During storm events, the amount of stormwater entering the City’s combined system has overwhelmed the regional sewage treatment system and caused the release of untreated or minimally treated effluent into the Susquehanna River. This project would include planning, design, and construction services to remove existing combined sewer infrastructure and replace it with separated storm and sanitary sewer systems.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will continue to work on removing existing combined sewer infrastructure and replacing it with a separated storm and sanitary sewer system. The City will work to integrate this with the Front Street Gateway project to reconstruct Front Street.	
Lead Agency:	City of Binghamton Highway and Engineer	
Supporting Agencies:	N/A	
Estimated Cost:	Medium	
Potential Funding Sources:	HMGP, BRIC, municipal budge	
Implementation Timeline:	Short	
Goals Met:	1,2	
Benefits:	Stops the release of harmful bacteria from sewage being released into the Susquehanna River.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	The community will be protected against harmful bacteria from the sewage release into the river and also when floods occur to their homes.	
Impact on Critical Facilities/Lifelines:	This action will restore and enhance the stormwater sewer line to be able to withstand severe storm events.	
Impact of Capabilities:	This action will ensure that the stormwater sewer line is functioning properly and is not compromised during a storm.	
Impact on Future Development:	This action will protect future development located nearby the sanitary stormwater sewage line.	
Climate Change Considerations:	This action takes into account the climate change impacts on the severity and frequency of flood events and sever storms.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists.
	Elevate Homes	Costly and would not solve flood problem to system.





SECTION 9.3. City of Binghamton

	Buyout homes	Costly and would not solve flood problem to system.
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Action 2024-BinghamtonC-05. Critical Facilities in Floodplain

Action Name:	2024-BinghamtonC-05	
Description of the Problem:	<p>The following 34 critical facilities are located in the floodplain:</p> <ul style="list-style-type: none"> - Communications_7 - Communications_9 - State Office Building Tower Site - City of Binghamton Headquarter - BARRETT PAVING MATERIALS INC - BARTHOLOMEW'S CAR CARE CENTER LLC - DOUBLETREE BY HILTON BINGHAMTON NY - JANACO INC - KWIK FILL A0011-025 - MIRABITO #75 - OUR LADY OF LOURDES MEMORIAL HOSPITAL INC - SPRINT POP - UNITED HEALTH SERVICES - VACRI CONSTRUCTION CORP - WATER TREATMENT PLANT - WEITSMAN RECYCLING LLC - BINGHAMTON DIVISION - Binghamton Co-Generation Plant - Binghamton Facility - Broome County Cold Storage - OUR LADY OF LOURDES HOSPITAL - Binghamton Police Station - Binghamton City Treatment Plant - Anitec Image Corporation - Former Stow Manufacturing - NYSEG - Binghamton Court St. MGP - NYSEG - Binghamton Washington St MGP - Bevier St Pump Station - County Office Building - Health Department - The Arena - Binghamton Fire Ambulance - Binghamton City Hall - Southview Post Office - Binghamton Animal Clinic <p>The City's Fire Station Headquarters and fleet have relocated to 235 Court Street which is not in the floodplain and was not impacted by any of the city's previous floods.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>The City will continue to work on mitigating the 34 critical facilities which are located in the 0.2% flood level. Currently the City Fire Station Headquarters and fleet have been relocated outside of the floodplain. A feasibility assessment will be conducted on the 33 other facilities and the most feasible option will be carried out to mitigate against flood impacts. For those facilities not city-owned, the city will conduct outreach to the property owners so they are aware of necessary flood protection measures to implement.</p>	
Lead Agency:	City Floodplain Administrator with support from facility operators	





Supporting Agencies:	N/A	
Estimated Cost:	Medium	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	
Implementation Timeline:	Medium	
Goals Met:	1, 2, 3	
Benefits:	Ensures continuity of operations of the critical facilities located in the floodplain.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	
Impact on Critical Facilities/Lifelines:	This action will protect the 33 critical facilities maintaining the critical services that they provide.	
Impact of Capabilities:	This action improves continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post disaster capabilities.	
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.	
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists.
	Relocate facilities	Relocation is expensive and results in loss or delay of critical services in the immediate area
	Establish plans to enter into MOU with neighboring critical facilities to provide service during flood events	Reduction in response times and delay of critical services in the immediate area.





Action 2024-BinghamtonC-06. Generators for City Fire Stations

Action Name:	2024-BinghamtonC-06	
Description of the Problem:	Four of the City Fire Stations do not have back-up power to run the facilities in the event of a power outage. A generator is needed to power the facilities and allow continuity of operations for the fire station. Currently, Four generators have been purchased, one is in progress.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The City will work to purchase the last of the five generators for the City Fire Stations, to allow for backup power during hazard events and power outages.	
Lead Agency:	City Fire Department	
Supporting Agencies:	N/A	
Estimated Cost:	Short	
Potential Funding Sources:	HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Annual Budget	
Implementation Timeline:	Short	
Goals Met:	1,2 3	
Benefits:	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard prone areas.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in protection of a critical facility that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists.
	Microgrid	Costly and difficult to implement.





	Solar panels and battery backup	Solar power is unlikely to be able to provide battery power for extended power failure events.
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Action 2024-BinghamtonC-07. Exchange Street Housing Flood Resistance

Action Name:	2024-BinghamtonC-07	
Description of the Problem:	During Tropical Storm Lee, vulnerable populations were displaced from their homes for extended periods of time due to the failure of utility systems serving the buildings in which they resided. This negatively affected the residents themselves and the health and social service providers who assist them.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will continue to explore funding availability and contracting opportunities to relocate critical systems (ex. air condition, potable water, etc.) above the base flood elevation to protect against severe storms and flooding.	
Lead Agency:	Binghamton Housing Authority	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	HMGP, BRIC, municipal budget	
Implementation Timeline:	Short	
Goals Met:	1, 2	
Benefits:	Maintenance of critical systems during and following a severe flood or storm event.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will maintain critical systems such as ac units for residential homes during flood events by elevating above the base flood elevation.	
Impact on Critical Facilities/Lifelines:	This action will protect residential lifelines during flood events.	
Impact of Capabilities:	Exploring funding opportunities to assist the community in elevating their critical systems enhances the City’s capabilities to respond during a storm event.	
Impact on Future Development:	This action will protect future development critical systems by having them build above the base flood elevation.	
Climate Change Considerations:	This action takes into consideration the climate change impacts on the severity and frequency of flood and storm events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
Alternatives	Action	Evaluation
	No Action	Problem persists.





	Remove critical systems	Not an option, loss of services.
	Relocate residential homes	Costly, not an option.

Action 2024-BinghamtonC-08. Updating City FEMA FIRMs

Action Name:	2024-BinghamtonC-08	
Description of the Problem:	Existing maps are outdated.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will continue to assist FEMA in the updating of the City FIRM maps to provide accurate floodplain estimates.	
Lead Agency:	City working with Broome County and FEMA	
Supporting Agencies:	N/A	
Estimated Cost:	High	
Potential Funding Sources:	FEMA HMA	
Implementation Timeline:	Short	
Goals Met:	3	
Benefits:	Life safety precautions.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will identify areas of flood concern to protect residents who reside in those high-risk areas.	
Impact on Critical Facilities/Lifelines:	This action will identify areas of concern where critical facilities are subject to flood impacts.	
Impact of Capabilities:	This action will provide updated FIRM maps for Town planners and engineers.	
Impact on Future Development:	This action will help to guide safe and sustainable development outside of the floodplain, away from areas prone to flooding.	
Climate Change Considerations:	This action takes into account climate change impacts to the severity and frequency of flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists.
	Utilize outdated FIRMS	Not accurate information.





	Use County flood maps	May not be locally accurate for the jurisdiction.
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Action 2024-BinghamtonC-09. Stormwater Sewer Enhancements

Action Name:	2024-BinghamtonC-09		
Description of the Problem:	Storm and sanitary lines must be separated where possible to prevent overflow.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The City will explore funding options to enhance the Westside Sewer Separation system (Ave, Laurel, Lathrop, Johnson, and Millard areas) as well as Conklin Town line to Jackson Street where existing stormwater sewer lines are inadequate. Once funding is secured, the City will implement the most feasible project to mitigate and assist with peak storm water flows.		
Lead Agency:	City Department of Public Works		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	HMGP, BRIC, municipal budget		
Implementation Timeline:	Medium		
Goals Met:	1, 2		
Benefits:	Enhancement of sewer separation system.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action will protect all community members from stormwater overflow during peak storm water flow events.		
Impact on Critical Facilities/Lifelines:	This action will enhance the sewer separation system which is a critical facility for the City.		
Impact of Capabilities:	This action will ensure safe operations of stormwater system and enhance stormwater collected capabilities provided by the City.		
Impact on Future Development:	This action will protect future development nearby the sewer system and that will utilize the system.		
Climate Change Considerations:	This action will take into account climate change impacts to the severity and frequency of flooding and severe storm events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action	Problem persists.
	Elevate homes	Costly and would not solve roadway flooding
	Buyout homes	Costly and would not solve roadway flooding

Action 2024-BinghamtonC-10. Stormwater Green Infrastructure Phase II

Action Name:	2024-BinghamtonC-10	
Description of the Problem:	Excessive amounts of impervious surface throughout the City contribute to localized flooding. A residential and commercial program was completed but ran out of funding.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will begin implementing Phase II of the Green Infrastructure design and installation on Washington Street, between Henry Street and Lewis Street.	
Lead Agency:	City Department of Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	<i>Municipal budget</i>	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3	
Benefits:	Restoring natural systems and increasing flood mitigation through pervious surfaces.	
Mitigation Action Type: <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will mitigate flood impacts on the entire community.	
Impact on Critical Facilities/Lifelines:	This action will protect all critical facilities throughout the City by mitigating flood impacts.	
Impact of Capabilities:	This action will ensure roadways are safely operable during flood events by integrating pervious surfaces throughout the City.	
Impact on Future Development:	This action will protect future development planned in the City from flood events.	
Climate Change Considerations:	This action takes into consideration climate change impacts to the severity and frequency of flood and severe storm events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
Alternatives	Action	Evaluation





	No Action	Problem persists.
	Remove homes	Not an option, costly, flood still occurs.
	Remove roadways	Not an option, costly, flood still occurs.

Action 2024-BinghamtonC-11. Stormwater Mitigation on Ball Ave

Action Name:	2024-BinghamtonC-10	
Description of the Problem:	Storm sewer outfall on Ball Ave was prevented from any further discharge into Chenango River. The drainage area from the Town of Dickinson and the Town of Kirkwood aggravated the storm water damage along State Street.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will continue to work on increasing the storm sewer pipe along Ball Ave and installation of A flap gate at the outfall into the Chenango River. Additionally the City will conduct buyout of properties along State Street.	
Lead Agency:	City; NYS DOT; County; Town of Dickinson; Village of Port Dickinson	
Supporting Agencies:	N/A	
Estimated Cost:	Medium	
Potential Funding Sources:	HMGP, BRIC, municipal budget	
Implementation Timeline:	Medium	
Goals Met:	1, 2, 3	
Benefits:	Enhanced storm sewer pipe and discharge into Chenango River.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	This action will protect the entire community from flood impacts due to storm sewer pipe compromise.	
Impact on Critical Facilities/Lifelines:	This action will enhance the storm sewer pipe which is a critical facility for the City.	
Impact of Capabilities:	This action will enhance the outfall pipe leading into the Chenango River to limit backflow from occurring and increasing inundation levels during flood events.	
Impact on Future Development:	This action will protect future development from storm sewage inundation.	
Climate Change Considerations:	This action takes into account climate change considerations on the severity and frequency of flood and severe storm events.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists.
	Remove storm sewage line.		Loss of service, costly.
	Relocate storm sewage line.		Costly, not an option, no space to relocate.

Action 2024-BinghamtonC-12. Collaborate with JSTP on implementation of I/I offset program.

Action Name:	2024-BinghamtonC-12	
Description of the Problem:	Joint sewage treatment plant requires flood protection.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will work to improve the flood walls at the Joint Sewage Treatment Plan.	
Lead Agency:	City	
Supporting Agencies:	Joint Sewage Treatment Plant	
Estimated Cost:	Low	
Potential Funding Sources:	<i>Municipal budget</i>	
Implementation Timeline:	short	
Goals Met:	3	
Benefits:	Enhanced flood protection at the sewage treatment plant.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will ensure the entire community will have access to safe sewage treatment and will be protected from harmful bacteria by mitigating compromise of the facility during a flood event.	
Impact on Critical Facilities/Lifelines:	This action will protect the sewage treatment plant, a critical facility, from being compromised during flood events.	
Impact of Capabilities:	This action will maintain the sewage treatment plant capabilities for the City.	
Impact on Future Development:	This action will protect future development that will utilize the sewage treatment plant for services.	
Climate Change Considerations:	This action takes into account climate change impacts to the severity and frequency of flood events.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists.
	Remove the sewage treatment plant		Not an option, costly, loss of service.
	Relocate sewage treatment plant.		Not an option, costly, no space, loss of service.

Action 2024-BinghamtonC-13. Sullivan Fire Training Facility Floodproofing

Action Name:	2024-BinghamtonC-13	
Description of the Problem:	Sullivan Fire Training Facility is prone to flooding.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The City will carry out the workplan to install one-way valve in the floor drain of the mechanic shop and purchase two door dams to minimize flood water entry into the classroom within the Sullivan Fire Training Facility.	
Lead Agency:	City	
Supporting Agencies:	Sullivan Fire Department	
Estimated Cost:	Low	
Potential Funding Sources:	HMGP, municipal budget	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3	
Benefits:	Sullivan Fire Training Facility protected against flood impacts.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	This action will protect the Sullivan Fire Training Facility classroom and mechanic shop, critical facilities, from flood impacts.	
Impact of Capabilities:	This action will ensure the standard of operations for the Sullivan Fire Department are upheld during flood events.	
Impact on Future Development:	N/A	





Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of severe storm and flood events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists.
	Remove the facility.		Costly, loss of service.
	Relocate facility.		Costly, no space for relocation, temporary loss of service.





SECTION 9.

9.4 TOWN OF BINGHAMTON

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Town of Binghamton with reducing losses from future hazard events. This annex is not guidance on 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 Town of Binghamton, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.4.1 Hazard Mitigation Planning Team

The Town of Binghamton identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Code Enforcement Officer represented the community on the Broome County HMP Planning Partnership and 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.4-1 summarizes Town officials who participated in the development of the annex and in what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.4-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Nick Pappas, Code Enforcement Officer Address: 279 Park Avenue, Binghamton, NY 13903 Phone Number: 607-772-0357 x 012 Email: code@townofbinghamton.com	Name/Title: Zachary Soboleski, Assistant Code Enforcement Officer Address: 279 Park Avenue, Binghamton, NY 13903 Phone Number: 607-772-0357 x 014 Email: codeassist@townofbinghamton.com
NFIP Floodplain Administrator	
Name/Title: Nick Pappas, Code Enforcement Officer Address: 279 Park Avenue, Binghamton, NY 13903 Phone Number: 607-772-0357 x 012 Email: code@townofbinghamton.com	
Additional Contributors	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	



9.4.2 Municipal Profile

The Town of Binghamton is located in Broome County, NY and partly encloses the City of Binghamton on the city's south side. The Town of Binghamton has a total area of 25.5 square miles. The Town of Binghamton is located in Broome County, NY and partly encloses the City of Binghamton on the city's south side. The town is south of the junction of the Susquehanna River and Chenango River and is in the southern tier of New York State. The Town of Binghamton is bordered on the north by the City of Binghamton, on the east by the Town of Conklin, on the south by the state of Pennsylvania, and the West by the Town of Vestal. Bayless Creek flows north from the northern part of the Town into the Susquehanna River. The Town includes the communities and hamlets of Orchard Park, Hawleyton, Park Terrace, and Summit Hill (Tetra Tech 2019).

Home rule is strong in New York State and thus, each town and village has its own governing body. Towns are made up of a Town Board and Supervisor. Villages generally have a Mayor, Clerk, and Council. Along with town and village roads, any public water and sewer systems are operated by the local municipality, though they may cooperate with County departments. Each municipality has charge over its planning and zoning and uses the County personnel as a resource (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Binghamton was 4,617, a 6.6 percent decrease from the 2010 Census.

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 2020 U.S. Census indicates that 3.7 percent of the population is 5 years of age or younger, 18 percent is 65 years of age or older, 0.1 percent is non-English speaking, 9.8 percent is below the poverty threshold, and 15.4 percent is considered disabled.

9.4.3 Jurisdictional Capability Assessment and Integration

The Town of Binghamton 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Binghamton to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.4-2 summarizes the planning and regulatory tools that are available to the Town of Binghamton. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.4-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Town Code, Chapter 102, Building Construction. 9/7/1976.	State and Local	Town Board, Supervisor, Building Official
Prohibits the erection, construction, enlargement, alteration, removal, improvement, demolition, conversion, or change in the nature of the occupancy of any building or structure without obtaining a separate building permit from the Town Building Official. Allows the Building Official to issue stop-work orders and certificates of occupancy.				
Zoning/Land Use Code	Yes	Town Code, Chapter 240, Zoning. 11/16/2010.	Local	Zoning Board of Appeals / Town Board
The Town of Binghamton Zoning Ordinance establishes development districts and outlines a Town zoning map. It establishes the Zoning Board of Appeals of five members, which decides on variances. The ordinance requires that all buildings, operations, storage, waste disposal, etc., shall be in accordance with applicable provisions of the latest published edition of the New York State Uniform Fire Prevention and Building Code. Additionally, the ordinance requires that the standards of the Broome County Health Department are met regarding water pollution.				
Subdivision Code	Yes	Town Code, Chapter 195, Subdivision of Land. 9/7/1976	Local	Code Enforcement Officer / Planning Board
This ordinance requires that land to be subdivided will be used for building purposes without danger to health or danger from fire, flood, or other hazards and requires proper provisions for drainage, water, sewerage, and other needed improvements. The proposed streets will conform to the Official Map, if any, and shall be properly related to the proposals shown on the Town Comprehensive Plan, if any, adopted by the Planning Board. In proper cases, park areas of suitable location, size, and character for playground or other recreational purposes shall be shown on the subdivision plat.				
Site Plan Code	Yes	Town Code, Chapter 240, Zoning, Article 10: Site Plan Review. 11/16/2010.	Local and County	Planning Board



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>Building permits requiring site plan review are issues for any buildings on any lot or tract of land in certain development districts, in compliance with a site plan for such lot or plot duly reviewed by written recommendations of the Town Planning Board. The Planning Board has the power to approve the Site Plan.</p>				
Stormwater Management Code	Yes	Town Code, Chapter 188, Storm Sewers.	Local	Stormwater Management Officer
<p>The purpose of this chapter is to provide for the health, safety, and general welfare of the citizens of the Town of Binghamton through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This article establishes methods for controlling the introduction of pollutants into the MS4 in order to comply with requirements of the SPDES general permit for municipal separate storm sewer systems. The objectives of this article are:</p> <ul style="list-style-type: none"> A. To meet the requirements of the SPDES general permit for stormwater discharges from MS4s or as amended or revised; B. To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process, or discharge non-stormwater wastes; C. To prohibit illicit connections, activities, and discharges to the MS4; D. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this article; and E. To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment, and other pollutants into the MS4. <p>The Stormwater Management Officer will review all stormwater pollution prevention plans and forward such plans to the applicable municipal board.</p>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
-				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p>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.</p>				
Growth Management	No	-	-	-
-				
Environmental Protection Ordinance(s)	Yes	Town Code, Chapter 119, Environmental Quality Review. 4/5/1977.	State and Local	Planning Board
<p>The purpose of the Town of Binghamton Environmental Quality Review Law is to incorporate the consideration of environmental factors into the planning and decision-making processes of the Town. In adopting the Town of Binghamton Environmental Quality Review Law, it is the intent of the Town that all agencies operating within its jurisdiction conduct their affairs with an awareness that they are the stewards of air, water, land, and living resources and that they have an obligation to protect the environment for the use and enjoyment of this and all future generations. It is the intent of this chapter that the protection and enhancement of the environment and human and community resources should be given appropriate weight with social and economic considerations in public policy and that those factors be considered together in reaching decisions on proposed activities. It is the intention of the Town that through</p>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>the implementation of this chapter, a suitable balance of social, economic, and environmental facets be incorporated into the decision-making processes of the Town. It is not the intention of this Town Environmental Quality Review Law that environmental factors be the sole consideration in decision-making.</p> <p>The Town of Binghamton shall comply with the provisions of the State Environmental Quality Review Act under Article 8 of the Environmental Conservation Law and its implementing regulations as codified in Title 6, Part 617 of NYCRR.</p>				
Flood Damage Prevention Ordinance	Yes	Town Code, Chapter 132, Flood Damage Prevention. 11/16/2010.	Federal, State, County, and Local	Zoning Board of Appeals
<p>It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> A. Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities. B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. D. Control filling, grading, dredging, and other development which may increase erosion or flood damages. E. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. F. Qualify for and maintain participation in the National Flood Insurance Program. <p>The ordinance allows the Town to require certificates of elevation, with deficiencies resulting in a stop work order; require anchoring of all new construction and substantial improvements; requires all new constructions and substantial improvements to be elevated above the base flood elevation or be flood-proofed in the case of non-residential buildings; and lays out special requirements for construction in the Special Flood Hazard Area.</p>				
Wellhead Protection	No	-		
Emergency Management Ordinance	No	-		
Climate Change Ordinance	No	-		
Other: Fire Prevention Ordinance	Yes	Town Code, Chapter 125, Fire Prevention.	Local	Code Enforcement Officer
<p>The Building Official is designated to administer and enforce the State Uniform Fire Prevention and Building Code within the Town of Binghamton, which the Town Board adopts for the Town of Binghamton. This chapter requires permits for certain combustible elements.</p>				
Planning Documents				
General/Comprehensive Plan	Yes	Town of Binghamton Comprehensive Plan, 2017	Local	Planning Board
<p>The Comprehensive Plan is the foundation for development and conservation within a community, providing a basis for future land use and zoning decisions and promoting sound growth. Having a comprehensive plan serves as a guide for Town officials, and also supports the Town in future efforts to obtain public funds. While the comprehensive plan itself is not law, New York's zoning enabling statutes require that zoning laws be adopted in accordance with a comprehensive plan, and other governmental agencies must consider the impact of capital projects on the adopted plan. This plan was prepared in accordance with New York Town Law §272-a Town Comprehensive Plan. The Plan describes environmental and agricultural land within the Township.</p>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Capital Improvement Plan	No	-		
Disaster Debris Management Plan	No	-		
Floodplain Management or Watershed Plan	Yes	Town Code, Chapter 132, Flood Damage Prevention. 11/16/2010.	Federal, State, County, and Local	Zoning Board of Appeals
<p>It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> G. Regulate uses which are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities. H. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. I. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. J. Control filling, grading, dredging, and other development which may increase erosion or flood damages. K. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. L. Qualify for and maintain participation in the National Flood Insurance Program. <p>The ordinance allows the Town to require certificates of elevation, with deficiencies resulting in a stop work order; require anchoring of all new construction and substantial improvements; requires all new constructions and substantial improvements to be elevated above the base flood elevation or be flood-proofed in the case of non-residential buildings; and lays out special requirements for construction in the Special Flood Hazard Area.</p>				
Stormwater Management Plan	Yes	Town Code, Chapter 188, Storm Sewers.	Local	Stormwater Management Officer
<p>The purpose of this chapter is to provide for the health, safety, and general welfare of the citizens of the Town of Binghamton through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This article establishes methods for controlling the introduction of pollutants into the MS4 in order to comply with requirements of the SPDES general permit for municipal separate storm sewer systems. The objectives of this article are:</p> <ul style="list-style-type: none"> F. To meet the requirements of the SPDES general permit for stormwater discharges from MS4s or as amended or revised; G. To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process, or discharge non-stormwater wastes; H. To prohibit illicit connections, activities, and discharges to the MS4; I. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this article; and J. To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment, and other pollutants into the MS4. <p>The Stormwater Management Officer will review all stormwater pollution prevention plans and forward such plans to the applicable municipal board.</p>				
Open Space Plan	No	-		



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Urban Water Management Plan	No	-		
Habitat Conservation Plan	No	-		
Economic Development Plan	No	-		
Community Wildfire Protection Plan	No	-		
Community Forest Management Plan	No	-		
Transportation Plan	Yes	Transportation Chapter, Comprehensive Plan, 2017	Local	Planning Board
<p>This chapter provides an overview of transportation in the Town for all modes of travel, including automobile and truck travel as well as cycling and walking. Road networks in New York are multi-jurisdictional in nature. New York State, through its Department of Transportation (NYSDOT), owns and is responsible for the maintenance of Interstate and State highways. Broome County is responsible for County roads through its Department of Public Works. The Town of Binghamton has jurisdiction over the remainder of the public roads in the Town.</p>				
Agriculture Plan	Yes	Broome County Agricultural Economic Development Plan, January 2019	County	Broome County Department of Planning & Economic Development
<p>The New York State Department of Agriculture and Markets requires recipients of Agricultural Protection Planning Program funds to identify lands that warrant protection measures as a result of their contribution to regional agricultural viability. In Broome County, this approach is two-fold:</p> <ul style="list-style-type: none"> • First, this analysis examines factors of environmental quality and countywide resiliency. Resiliency refers to the land's ability to absorb and recover from shocks and stresses on agricultural production. For Broome County, flooding often causes these disruptions. <p>Second, this analysis examines vulnerability to development, defined here as the land's exposure, susceptibility, or capacity for the conversion of agricultural land to other more intensive uses, such as residential or commercial development.</p>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
Tourism Plan	No	-	-	-
Business/ Downtown Development Plan	No	-	-	-
Other (for example NYRCR, etc.)	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYSDHSES
This portion of the CEMP addresses the State’s overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA’s five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operations Plan, 2/14/2008	County	Broome County Emergency Management
The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No	-	-	-
Threat & Hazard Identification & Risk Assessment	No	-	-	-
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	Local and state	NYS
This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<p>A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders.</p> <p>The PHRP will do the following:</p> <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; 				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<ul style="list-style-type: none"> - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and provide an overview of the stakeholder planning group (SPG).				
Other: Hazardous Materials Incident Response Plan	Yes	Broome County Emergency Medical Services System Hazardous Materials Incident Response Plan (2008)	County	County OEM
The purpose of the plan is the coordination of on-scene emergency medical care, transportation, and hospital treatment for victims of a hazardous materials emergency in Broome County.				

Development and Permitting Capability

Table 9.4-3 summarizes the capabilities of the Town of Binghamton to oversee and track development.

Table 9.4-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> • If you issue development permits, what department is responsible? • If you do not issue development permits, what is your process for tracking new development? 	Yes	Planning Board, Code Officer
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Permits are tracked by hazard area.
Do you have a buildable land inventory? <ul style="list-style-type: none"> • If you have a buildable land inventory, please describe 	Yes	Yes, mapped current land uses and zoning maps are included within the Comprehensive Plan.
Describe the level of build-out in your jurisdiction.	N/A	The Town of Binghamton has a total area of 15,661 acres (about 24 square miles) in tax parcels, and as of September 2016 contained 2,905 tax parcels. Residential is the largest land use type in the Town, accounting for 67 percent of the tax parcels (1,947) and 52 percent of the land area (8,124 acres). The second largest land use is vacant land.

Administrative and Technical Capability

Table 9.4-4 summarizes potential staff and personnel resources available to the Town of Binghamton and their current responsibilities that contribute to hazard mitigation.



Table 9.4-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board consists of five members and is authorized to approve plats showing lots, blocks, or sites, with or without streets or highways, and to pass and to approve the development of plats already filed in the office of the Clerk, as well as modify Zoning laws.
Zoning Board of Appeals	Yes	The Zoning Board of Appeals consists of five members and has the power to vary or modify the application of any of the regulations or provisions relating to the use, construction, reconstruction, or alteration of buildings or structures, or the usage of the land.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	<p>The Town of Binghamton Highway Department is responsible for the upkeep and maintenance of Town roads including, but not limited to, snow removal, ice control, tree and brush removal, signage and paving, routine road maintenance, seasonal work, emergency and special projects.</p> <p>During the winter season, our main responsibility is to ensure our residents' safety while driving on the roads. In order to do so, our employees clear the roads of snow and apply deicers. In the springtime, we assist in the removal of brush from residents' property and clean-up from winter. Come summer months we concentrate on road repair including paving, patching, and road markings. Lastly, during Autumn we aid in leaf removal and start our preparation for winter.</p>
Construction/Building/Code Enforcement Department	Yes	The Building Department is responsible for all aspects of construction within the Town of Binghamton, both commercial and residential. This includes fences, pools, generators, plumbing, patios, and decks. The Inspector ensures that the construction is performed within the guidelines of the Town of Binghamton Code and the New York State Building and Fire Code.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department performs routine maintenance.
Mutual aid agreements	Yes	The town has mutual aid agreements with neighboring fire departments.
Human Resources Manual - Do any job descriptions specifically include identifying	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
or implementing mitigation projects or other efforts to reduce natural hazard risk?		
Other		
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering Services: Clark Patterson Lee 59 Court St. Binghamton, NY 13901
Engineers or professionals trained in building or infrastructure construction practices	Yes	Clark Patterson Lee 59 Court St. Binghamton, NY 13901
Planners or engineers with an understanding of natural hazards	Yes	Clark Patterson Lee 59 Court St. Binghamton, NY 13901
Staff with expertise or training in benefit/cost analysis	Yes	Clark Patterson Lee 59 Court St. Binghamton, NY 13901
Professionals trained in conducting damage assessments	Yes	Clark Patterson Lee 59 Court St. Binghamton, NY 13901
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	Yes	Clark Patterson Lee 59 Court St. Binghamton, NY 13901
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other (NFIP Administrator)	Yes	Code Enforcement Officer

Fiscal Capability

Table 9.4-5 summarizes financial resources available to the Town of Binghamton.

Table 9.4-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No



Education and Outreach Capability

Table 9.4-6 summarizes the education and outreach resources available to the Town of Binghamton.

Table 9.4-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Municipal website
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.4-7 summarizes classifications for community programs available to the Town of Binghamton.

Table 9.4-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	10	Unknown
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Unknown	Unknown
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.4-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.4-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.4.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.4-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.4-9 summarizes the NFIP statistics for the Town of Binghamton.

Table 9.4-9. Town of Binghamton NFIP Summary of Policy and Claim Statistics

# Policies	4
# Claims (Losses)	4
Total Loss Payments	\$12,210
# Repetitive Loss Properties (NFIP definition)	2
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0
# RL/SRL Properties Within the 1% Annual Chance Flood Boundary	0
# RL/SRL Properties Within the 0.2% Annual Chance Flood Boundary	0

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: _____

Flood Vulnerability Summary

Table 9.4-10 provides a summary of the NFIP program in the Town of Binghamton.

Table 9.4-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Pierce Creek Road, Roberts Road, and Morgan Road
Do you maintain a list of properties that have been damaged by flooding?	The Town does not maintain a list.
Do you maintain a list of property owners interested in flood mitigation?	The Town does not maintain a list.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown, at this time.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No.
How do you make Substantial Damage determinations? • How many were declared for recent flood events in your jurisdiction?	IE County - FEMA - SOEM
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Two were declared; Roberts Road and Pierce Creek Road.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	None.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes.
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement.
Are any certified floodplain managers on staff in your jurisdiction?	Yes, Code Enforcement.
Do you have access to resources to determine possible future flooding conditions from climate change?	No.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town works with Broome County and SOEM.
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	Through the Town Engineer.



NFIP Topic	Comments
What are the barriers to running an effective NFIP program in the community, if any?	Funding.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	There has never been a CAV or CAC conducted.
What is the local law number or municipal code of your flood damage prevention ordinance?	Town of Binghamton Local Ordinance Chapter 132.
What is the date that your flood damage prevention ordinance was last amended?	It was amended in 2015.
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	It meets the minimum requirements.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Planning Board and the MS4 address these issues.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No.

9.4.5 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 9.4-11 through Table 9.4-13.

Table 9.4-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0



	New Construction Permits Issued			
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.4-12. Recent Major Development and Infrastructure from 2018 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
Rehabilitation of Steel Arch Bridge	Infrastructure	-	Hawleyton Road and Little Snake Creek	Yes	Construction in Progress
Rehabilitation of Steel Arch Bridge	Infrastructure	-	Hawleyton Road and Little Snake Creek	Yes	Construction in Progress
Murphy Road Culvert Repairs	Infrastructure	-	Murphy Road	Yes	Completed

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

Table 9.4-13. 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
Mill Street Subdivision	Residential	21 lots	3761 Mill Street, Binghamton, NY 13903 / Tax Map No.: 160.20-4-16.21	Yes	Anticipated, no approval date
ATLAS Renewables, LLC (Solar Farm)	Commercial	26.9 acres	57 Powers Road, Binghamton, NY 13903 / Tax Map No.: 161.14-1-35.11	Yes	Anticipated, no approval date

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

9.4.6 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 Town of Binghamton’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.4-1 through Figure 9.4-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which





Binghamton has significant exposure. The maps show the location of potential new development, where available.

Figure 9.4-1. Town of Binghamton Hazard Area Extent and Location Map 1

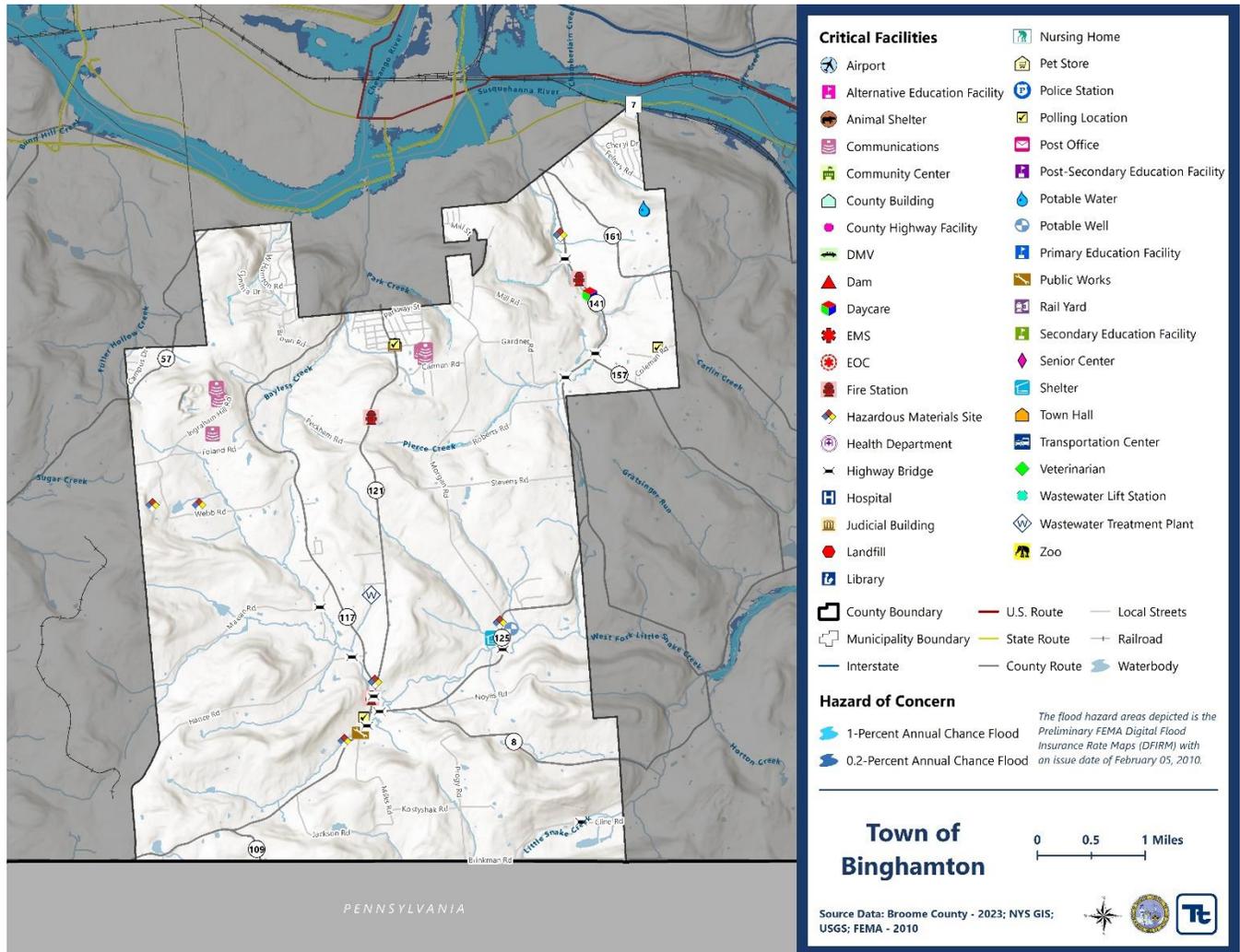
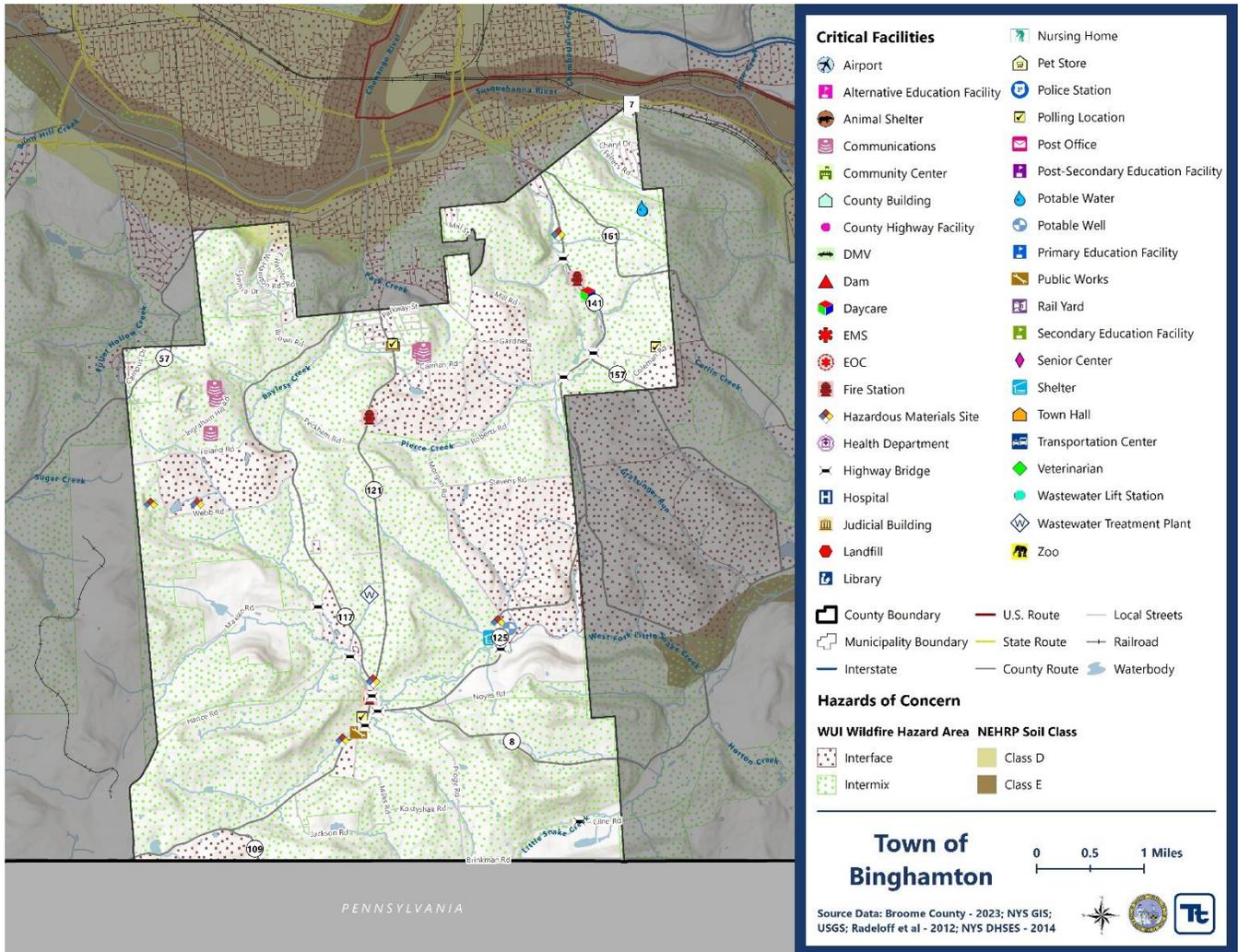




Figure 9.4-2. Town of Binghamton Hazard Area Extent and Location Map 2





Hazard Event History

The history of natural and non-natural hazard events in the Town of Binghamton is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.4-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.4-14. Hazard Event History in the Town of Binghamton

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	Damages were seen in the Town such as downed trees and power lines.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The COVID-19 pandemic impacted the Town and economy. Businesses closed down and the community adhered to social distancing and mask requirements.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	Flood damages were seen to roads and infrastructure.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Damages were seen to daily functions and accessibility to roads.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Binghamton.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Binghamton reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community.

Table 9.4-15 shows Binghamton’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.4-15. Hazard Ranking

Hazard	Rank
Dam/Levee	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.4-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.4-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage		
		None Identified.					

There are no high-hazard dams located in the Town of Binghamton.

Identified Issues

After review of the Town of Binghamton’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Binghamton identified the following vulnerabilities within their community:





- Lack of source at backup power critical town facilities
- Rupture of water mains during the extended duration of low temps; a project is currently in progress for the Orchard Park water system and have replaced water mains in this section of town
- Collapse/degradation of sanitary mains during severe storm events; this results in interruption of service. The Town has a project in progress to line sanitary sewers in Orchard and South Mountain to help alleviate this problem
- Trees down from ice/snow: Interrupt power service, interrupt traffic flow
- Scouring of bridge culvert structures and erosion of stream banks; Peckam Road had \$300,000 in damages
- September 2011 – culvert replaced on Cynthia Drive (should be identified in the last plan)
- Critical facilities without backup power: town hall and town highway garage
- Flooding at Roberts Road, Pierce Creek Road, and Morgan Road
- The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations in relation to the identified hazards of concern. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*

9.4.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.4-17 indicates progress on the Town’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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.4-17, the Town of Binghamton identified the following mitigation efforts completed since the last HMP:

- Upgrades to culverts.
- Access to generators.

Since the adoption of the County’s first HMP, the Town of Binghamton has made significant mitigation progress in the following areas:

- Stormwater Management.



- Generators for backup power



Table 9.4-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Binghamton-1	Generator for Binghamton Community Center	All Hazards	Code Enforcement	The Binghamton Community Center lacks a backup power source. The Community Center is used as a sheltering location when necessary and can shelter 100 people. The Town will purchase and install a generator at the Community Center, including necessary electrical hookup components.	1. No Progress 2. Challenges with funding availability.	1. Project to be included in 2024 HMP. 2. The Town will purchase and install a generator at the Community Center, including necessary electrical hookup components. 3. N/A
T. Binghamton-2	Generator for Binghamton Communications Center	All Hazards	Code Enforcement	The Binghamton Communications Center lacks a backup power source. The Communications Center is used as a sheltering location when necessary and can shelter 100 people. The Town will purchase and install a generator at the Communications Center, including necessary electrical hookup components.	1. Complete 2. N/A	1. Discontinue. 2. N/A 3. Completed
T. Binghamton-3	Generator for Binghamton Town Hall	All Hazards	Code Enforcement	The Binghamton Town Hall lacks a backup power source. The Town Hall is used as a sheltering location when necessary and can shelter 100 people. The Town will purchase and install a generator at the Town Hall, including necessary electrical hookup components.	1. No Progress 2. N/A	1. Project to be included in 2024 HMP. 2. The Town will purchase and install a generator at the Town Hall, including necessary electrical hookup components. 3. N/A
T. Binghamton-4	Maxian Road Culvert size increase	Flood	Town Engineer/NFIP Administrator	Existing culvert overtops during heavy rain which can damage the roadway. Analyze the Maxian Road Culvert size increase. The culvert is roughly 300 ft	1. Complete 2. N/A	1. Discontinue. 2. N/A 3. Completed



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				downstream of Agwaterra Pond (source) and as a consequence debris mitigation may play a role, but is likely not enough to fix the problem alone.		
T. Binghamton-5	Sanitary Sewer Improvement	Flood	Engineering and DPW	Sanitary Sewer are susceptible to collapse and I&I Step 1: Use existing video analysis combined with additional analysis of sewer infrastructure conditions to determine what locations are most susceptible to collapse and I&I. Step 2: Carry out sewer line restoration/replacement via traditional replacement methods and/or a new pipe lining program. Some of this has been started.	1. In Progress. 2. In 2022 and 2021 the town completed sewer lining.	1. Project to be included in 2024 HMP. 2. The Town will use existing video analysis combined with additional analysis of sewer infrastructure conditions to determine what locations are most susceptible to collapse. Once identified the Town will then carry out sewer line restoration/replacement through traditional replacement methods or establish a new pipe lining program. The Town has already started on the sewer analysis. 3. N/A
T. Binghamton-6	Replace and augment susceptible structures and portions of the stream bank.	Flood	DPW	The stream bank is unstable in some areas. Initiate an analysis/monitoring program and carry out projects to replace and augment susceptible structures and portions of stream bank.	1. No Progress. 2. N/A	1. Project to be included in 2024 HMP. 2. The Town will initiate an analysis and monitoring program to carry out projects to replace and augment portions of the streambank that are susceptible to erosion and instability. 3. N/A
T. Binghamton-7	Replace Water Mains at deeper pipe depth.	Extreme Temperature, Severe Winter Storm	DPW	Water mains are prone to rupture due to shallow depth. Identify areas susceptible to rupture; carry out projects to replace water mains at a deeper pipe depth.	1. No Progress. 2. N/A	1. Project to be included in 2024 HMP. 2. The Town will identify areas susceptible to rupture and carry out replacement of water mains to a deeper pipe depth. 3. N/A



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Binghamton-8	Peckham Road culvert upgrade	Flood, Severe Storm	DPW	The culvert is undersized. The culvert will be replaced with a larger size.	1. Complete 2. N/A	1. Discontinue. 2. N/A 3. Completed
T. Binghamton-9	Morgan and Roberts Road Intersection Culvert	Flood, Severe Storm	DPW	The culvert is in need of replacement. The culvert will be repaired/replaced.	1. Complete 2. N/A	1. Discontinue. 2. N/A 3. Completed
T. Binghamton-10	Outreach to repetitive loss properties	Flood	Town NFIP Administrator	Repetitive loss property is in danger of future flood damage. Submittal of a letter of intent for acquiring repetitive loss property located on Conklin Road. Review potential funding sources for a 25% match.	1. In Progress. 2. Two buildings on Conklin Road.	1. Project to be included in 2024 HMP. 2. The Town will submit a letter of intent for acquiring the repetitive loss properties which are located on Conklin Road. The Town will review potential funding sources for a 25% match requirement. 3. N/A
T. Binghamton-11	Assist in the update of flood plain (FIRM) maps	Flood	Town NFIP Administrator	FIRMs are outdated. – Jurisdictional Level. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC, and USGS; and identification of flood-prone areas outside of currently designated areas	1. In Progress. 2. N/A	1. Project to be included in 2024 HMP. 2. The Town will assist FEMA in the update of the Town FIRM maps to identify flood-prone areas outside of currently designated areas. 3. N/A
T. Binghamton-12	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	The current flood damage prevention ordinance (1987) does not include NYS freeboard requirements. The Flood Damage Prevention Ordinance will be updated to	1. In Progress. 2. N/A	1. Project to be included in 2024 HMP. 2. The Town will work to update the flood damage prevention ordinance to include the NYS freeboard requirement. 3. N/A



Proposed Hazard Mitigation Initiatives for the HMP Update

Binghamton participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Binghamton 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 the Town’s priorities.

Table 9.4-18 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. Table 9.4-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.4-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure		X								X
Disease Outbreak		X								X
Drought		X								X
Earthquake		X								X
Extreme Temperature		X								X
Flood	X	X	X		X			X		X
Invasive and Nuisance Species		X								X
Severe Storm		X								X
Severe Winter Storm		X								X
Wildfire		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 stormwater 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 9.4-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-Binghamton T-01	859 Hawleyton Road Highway Department Generator	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2024-Binghamton T-02	Pump House Emergency Generators at 31 Powers Road and 58 Felters Road	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2024-Binghamton T-03	Generator for Binghamton Community Center	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2024-Binghamton T-04	Generator for Binghamton Town Hall	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2024-Binghamton T-05	Sanitary Sewer Improvement	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2024-Binghamton T-06	Streambank Restoration	0	1	1	1	1	0	0	1	1	1	1	1	1	1	11	High
2024-Binghamton T-07	Replacement of Water Mains	0	1	1	1	1	1	1	1	1	0	1	1	1	1	12	High
2024-Binghamton T-08	Repetitive Loss Property Mitigation	1	1	1	1	1	1	0	1	0	0	1	1	1	1	11	High
2024-Binghamton T-09	Update FEMA FIRM Maps	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High
2024-Binghamton T-10	Update NFIP Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High



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2024-Binghamton T-11	Socially Vulnerable Populations Outreach	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	12	High
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Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).



Action 2024-Binghamton T-01. 859 Hawleyton Road Highway Department Generator

Action Name:	2024-Binghamton-001		
Description of the Problem:	The Highway Department's current generator is outdated and does not have an automatic start switch. With the loss of power and the inability to start the current generator, trucks can exit or enter the town garage in times of emergency.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	New generator on automatic transfer and start switch.		
Lead Agency:	Code Enforcement		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget		
Implementation Timeline:	Medium		
Goals Met:	1, 2		
Benefits:	Life safety precautions.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	The proper function of the Highway Department in times of power outages is crucial to the life safety of the community.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Install solar panels		Weather dependent; need a large amount of space for installation; expensive if repairs needed.
	Install wind turbine		Weather dependent; poses a threat to wildlife; expensive repairs if needed





Action 2024-BinghamtonT-02. Pump House Emergency Generators at 31 Powers Road and 58 Felters Road

Action Name:	2024-Binghamton-002		
Description of the Problem:	Both pump stations provide water to local neighborhoods. In the occurrence of a long-term power outage, residents and local fire departments would not have access to water on-site.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	An on-demand emergency power generator would provide power to keep pump stations operating in emergency situations.		
Lead Agency:	Code Enforcement		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget		
Implementation Timeline:	Medium		
Goals Met:	1, 2		
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during power outages.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	The proper function of the Highway Department in times of power outages is crucial to the life safety of the community.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists
	Install solar panels		Weather dependent; need a large amount of space for installation; expensive if repairs needed.





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	Install wind turbine	Weather dependent; poses a threat to wildlife; expensive repairs if needed
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Action 2024-BinghamtonT-03. Generator for Binghamton Community Center

Action Name:	2024-Binghamton-03		
Description of the Problem:	The Binghamton Community Center lacks a backup power source. The Community Center is used as a sheltering location when necessary and can shelter 100 people.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will purchase and install a generator at the Community Center, including necessary electrical hookup components.		
Lead Agency:	Code Enforcement		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget		
Implementation Timeline:	Medium		
Goals Met:	1, 2		
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during power outages.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	The proper function of the Highway Department in times of power outages is crucial to the life safety of the community		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists
	Install solar panels		Weather dependent; need a large amount of space for installation; expensive if repairs needed
	Install wind turbine		Weather dependent; poses a threat to wildlife; expensive repairs if needed



Action 2024-BinghamtonT-04. Generator for Binghamton Town Hall

Action Name:	2024-Binghamton-04		
Description of the Problem:	The Binghamton Town Hall lacks a backup power source. The Town Hall is used as a sheltering location when necessary and can shelter 100 people.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will purchase and install a generator at the Town Hall, including necessary electrical hookup components.		
Lead Agency:	Code Enforcement		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget		
Implementation Timeline:	Medium		
Goals Met:	1, 2		
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during power outages.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	The proper function of the Highway Department in times of power outages is crucial to the life safety of the community.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists
	Install solar panels		Weather dependent; need a large amount of space for installation; expensive if repairs needed.
	Install wind turbine		Weather dependent; poses a threat to wildlife; expensive repairs if needed



Action 2024-BinghamtonT-05. Sanitary Sewer Improvement

Action Name:	2024-Binghamton-05	
Description of the Problem:	The sanitary sewer is susceptible to collapse.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will use existing video analysis combined with additional analysis of sewer infrastructure conditions to determine what locations are most susceptible to collapse. Once identified the Town will then carry out sewer line restoration/replacement through traditional replacement methods or establish a new pipe lining program. The Town has already started on the sewer analysis.	
Lead Agency:	Engineering Department; Department of Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	High	
Potential Funding Sources:	FEMA HMA	
Implementation Timeline:	Short	
Goals Met:	1,2, 3	
Benefits:	Life safety precautions.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will protect socially vulnerable populations from sewer leaks and floods by fixing undersized sewer lines.	
Impact on Critical Facilities/Lifelines:	This action will restore the sewer system which is a critical facility within the Town.	
Impact of Capabilities:	This action will maintain the existing sewer system from collapsing and ensure standards of operation are maintained during hazard events.	
Impact on Future Development:	This action will support future development that utilizes the existing sewer system.	
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of hazard events which may result in a higher risk of sewer system collapse.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists
	Remove sewer system	Not feasible, loss of capabilities and critical facility.
	Revert to sewer tanks.	Not sustainable, not feasible.



Action 2024-BinghamtonT-06. Streambank Restoration

Action Name:	2024-Binghamton-06	
Description of the Problem:	The streambank is unstable in some areas.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will initiate an analysis and monitoring program to carry out projects to replace and augment portions of the streambank that are susceptible to erosion and instability.	
Lead Agency:	Department of Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	High	
Potential Funding Sources:	HMGP, BRIC, municipal budget	
Implementation Timeline:	Short	
Goals Met:	1	
Benefits:	Life safety precautions.	
Mitigation Action Type: <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will protect socially vulnerable populations who reside near the stream or utilize the streambank for recreation activities.	
Impact on Critical Facilities/Lifelines:	This action will protect critical facilities that are located near the stream which is subject to erosion.	
Impact of Capabilities:	N/A	
Impact on Future Development:	This action will protect future development planned around the stream by mitigating erosion.	
Climate Change Considerations:	This action takes into account climate change impacts on the frequency and severity of hazards which will exacerbate erosion along the streambank.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists
	Retreat from areas near the stream	Costly, unpopular
	Levees along stream	Not feasible/environmentally damaging, costly



Action 2024-BinghamtonT-07. Replacement of Water Mains

Action Name:	2024-Binghamton-07		
Description of the Problem:	The water mains are prone to rupture due to shallow depth.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will identify areas susceptible to rupture and carry out the replacement of water mains to a deeper pipe depth.		
Lead Agency:	Department of Public Works		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	BRIC, CHIPS, town budget		
Implementation Timeline:	Short		
Goals Met:	1		
Benefits:	Life safety precautions.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action protects socially vulnerable populations' access to water by mitigating water main ruptures in times of hazard events.		
Impact on Critical Facilities/Lifelines:	Providing water in times of emergency/fire prevention.		
Impact of Capabilities:	This action will protect water utilities within the Town.		
Impact on Future Development:	This action will ensure future development has access to reliable water sources.		
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of hazards, such as flooding, which could compromise the water main.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists
	Purchase tanker truck for water		Transportation route lost, emergency service response times.
	Develop contracts with neighboring towns for fire response		Too slow of response times, towns unable



Action 2024-BinghamtonT-08. Repetitive Loss Property Mitigation

Action Name:	2024-Binghamton-08		
Description of the Problem:	Two repetitive loss properties on Conklin Road are in danger of future flood damage.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will submit a letter of intent for acquiring the repetitive loss properties which are located on Conklin Road. The Town will review potential funding sources for a 25% match requirement.		
Lead Agency:	Town NFIP Administrator		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and FMA, BRIC, local cost share by residents		
Implementation Timeline:	Short		
Goals Met:	3		
Benefits:	Eliminates flood damage to homes and residents, and creates open space for the municipality increasing flood storage.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Removing homes from the floodplain immediately removes the risk to life and property.		
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
Impact on Future Development:	Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists
	Elevate homes		When this area floods, the entire area is impacted; elevating homes would not



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		eliminate the problem and still lead to road closures and impassable roads.
	Elevate roads	Elevated roadways would not protect the homes from flood damage.





Action 2024-BinghamtonT-09. Update FEMA FIRM Maps

Action Name:	2024-Binghamton-09		
Description of the Problem:	The Town’s FIRM maps are outdated.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will assist FEMA in the update of the Town FIRM maps to identify flood-prone areas outside of currently designated areas.		
Lead Agency:	Town NFIP Administrator		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMA		
Implementation Timeline:	Short		
Goals Met:	3		
Benefits:	Life safety precautions.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will identify areas of flood concern to protect residents who reside in those high-risk areas.		
Impact on Critical Facilities/Lifelines:	This action will identify areas of concern where critical facilities are subject to flood impacts.		
Impact of Capabilities:	This action will provide updated FIRM maps for Town planners and engineers.		
Impact on Future Development:	This action will help to guide safe and sustainable development outside of the floodplain, away from areas prone to flooding.		
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of flood events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists
	Utilize outdated FIRMS		Not accurate information.
	Use County flood maps.		May not be locally accurate for the jurisdiction.



Action 2024-BinghamtonT-10. Update NFIP Flood Damage Prevention Ordinance

Action Name:	2024-Binghamton-10		
Description of the Problem:	The Town’s flood damage prevention ordinance (1987) does not include NYS freeboard requirements.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will work to update the flood damage prevention ordinance to include the NYS freeboard requirement.		
Lead Agency:	Town NFIP Administrator		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMA		
Implementation Timeline:	Short		
Goals Met:	3		
Benefits:	Life safety precautions.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will protect residents from flood impacts and damages by requiring NYS to have a freeboard.		
Impact on Critical Facilities/Lifelines:	This action will ensure critical facilities are operational during flood events by requiring structures to be built to NYS freeboard requirements.		
Impact of Capabilities:	N/A		
Impact on Future Development:	This action will protect future development from flooding impacts.		
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of flooding.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists
	Utilize outdated FDPO		Does not include NYS freeboard, not accurate.
	Encourage freeboard but do not require it.		The problem persists at risk of not being compliant with state requirements.



Action 2024-BinghamtonT-11. Socially Vulnerable Populations Outreach

Action Name:	2024-Binghamton-11		
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations in relation to the identified hazards of concern. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget, HMGP		
Implementation Timeline:	Within 3 years		
Goals Met:	1,2,3		
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Village. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Town's already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No Action.	Current methods remain the only ones used.
	Rely on state or federal resources.	Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.	Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.





SECTION 9.

9.5 TOWN OF CHENANGO

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

9.5.1 Hazard Mitigation Planning Team

The Town of Chenango identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.5-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.5-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: JoAnne Klenovic, Supervisor/Town Board Address: 1529 State Route 12, Binghamton, NY 13901 Phone Number: (607) 648 – 4809 ext. 6 Email: supervisor@townofchenangony.gov	Name/Title: Joyanne Kasmarcik, Secretary to the Highway Superintendent Address: 1529 State Route 12, Binghamton, NY 13901 Phone Number: (607) 648 – 4809 ext. 300 Email: highway@townofchenangony.gov
NFIP Floodplain Administrator	
Name/Title: Gavin Stiles, Ordinance Department Head Address: 1529 State Route 12, Binghamton, NY 13901 Phone Number: (607) 648 – 4809 ext. 5 Email: gavin.stiles@townofchenangony.gov	
Additional Contributors	
Name/Title: Alex Urda, Engineer Method of Participation:	
Name/Title: Greg Burden, Public Works Method of Participation:	
Name/Title: Derin Kraack, Public Works	





Primary Point of Contact	Alternate Point of Contact
Method of Participation:	
Name/Title: Lizanne Tiesi-Koriek, Town Clerk	
Method of Participation:	

9.5.2 Municipal Profile

The Town of Chenango is located in the eastern part of Broome County, New York, northeast of Binghamton. The Chenango River flows along the eastern border of the town. Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Chenango is governed by a Supervisor and four council members. The Town of Chenango has a total area of 34.3 square miles. The Town of Chenango is located in the eastern part of Broome County, NY, northeast of Binghamton. The Chenango River is the eastern town line. The Town includes the communities and hamlets of Castle Creek, Chenango Bridge, Chenango Forks, Glen Castle, Hinnmans Corners, Kattelville, and Nimmonsburg (Tetra Tech 2019) . According to the U.S. Census, the 2020 population for the Town of Chenango was 10,959 a 2.6 percent decrease from the 2010 Census.

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 2020 U.S. Census indicates that 7.8 percent of the population is 5 years of age or younger, 7.8 percent is 65 years of age or older, 0.3 percent is non-English speaking, 11.8 percent is below the poverty threshold, and 12.4 percent is considered disabled.

9.5.3 Jurisdictional Capability Assessment and Integration

The Town of Chenango 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 /or policy





documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Chenango to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.5-2 summarizes the regulatory tools that are available to the Town of Chenango. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.5-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Town Code, Chapter 3, Building Construction Administration. 5/2/77	State and Local	Building Official
Sets up the office of the Building Official, which has the power to receive applications and issue permits for the erection, alteration, removal, and demolition of buildings or structures or parts thereof and shall examine the premises for which such applications have been received or such permits have been issued for the purpose of ensuring compliance with laws, ordinances, and regulations governing building construction.				
Zoning/Land Use Code	Yes	Town Code, Chapter 73, Zoning. 1/7/78	Local	Code Enforcement Officer
The Zoning Ordinance is enacted for the purpose of promoting the health, safety, morals, and general welfare of the community by lessening congestion in the streets; securing safety from fire, panic, and other dangers; by providing adequate light and air; preventing overcrowding of land; avoiding undue concentration of population; facilitating the adequate provision of transportation, water, school, and other public requirements; and regulating the location and use of buildings, structures and land for trade, industry, residence, and other purposes in accordance with a Comprehensive Plan. Sets up two special districts, the Flood Management District and the Aquifer District.				
Subdivision Code	Yes	Town Code, Chapter 62, Subdivision of Land. 2/3/86	Local	Planning Board
It is the intent of this ordinance that a subdivision shall not be approved and facilities shall not be accepted by the Town unless the subdivider fully completes all necessary facilities so that the Town's obligation is limited to maintenance of a completed facility and does not include any portion of its construction. Subdivider must apply to the Planning Board and acquire from the Board. New utilities, including culverts and storm drains, must be inspected by the City Engineer.				
Site Plan Code	Yes	Town Code, Chapter 73-28, Zoning. 1/7/78	Local and County	Planning Board
For Residential single-family subdivisions, a Master site plan indicating individual lot layout, ten-foot contours, open spaces, land use areas, streets, utility easements, rights-of-way, and adjacent land use is required. For all other developments, a proposed site plan, including ten-foot contours, elevations, location and dimensions of proposed buildings, signs, open spaces, land use areas, streets, utility easements, rights-of-way, and adjacent land use, is required. The Town Planning Board will then review and approve.				
Stormwater Management Code	Yes	Town Code, Chapter 57b, Stormwater Management and Erosion and Sediment Control. 5/7/07	Local	Stormwater Management Officer





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings in § 57B-2 hereof. This chapter seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> A. Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised; B. Require land development activities to conform to the substantive requirements of the New York State Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; C. Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels; D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; E. Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and F. Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety. <p>The Stormwater Management Officer will review all stormwater pollution prevention plans and forward such plans to the applicable municipal board.</p>				
Post-Disaster Recovery/ Reconstruction Code	No			
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p>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.</p>				
Growth Management	No			
Environmental Protection Ordinance(s)	Yes	Town Code, Chapter 35, Environmental Quality Review. 2/27/84	Local	Town of Chenango, All Agencies
<p>The purpose of the Town of Chenango Environmental Quality Review Law is to incorporate the consideration of environmental factors into the planning and decision-making processes of the Town of Chenango. In adopting the Town of Chenango Environmental Quality Review Law, it is the intent of the Town of Chenango that all agencies operating within its jurisdiction conduct their affairs with an awareness that they are the stewards of air, water, land, and living resources and that they have an obligation to protect the environment for the use and enjoyment of this and all future generations. For actions having an impact on the environment, applicants must file an Environmental Assessment statement. The lead agency will review the Environmental Assessment and determine whether further action, including a public hearing, is required.</p>				
Flood Damage Prevention Ordinance	Yes	Town Code, Chapter 39, Flood Damage Prevention. 3/26/1987	Federal, State, County, and Local	Ordinance Administrator/Building Inspector





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>It is the purpose of the ordinance to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> A. Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities. B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. D. Control filling, grading, dredging, and other development which may increase erosion or flood damages. E. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. F. Qualify for and maintain participation in the National Flood Insurance Program. <p>The ordinance allows the Town to require certificates of elevation, with deficiencies resulting in a stop work order; require anchoring of all new construction and substantial improvements; requires all new constructions and substantial improvements to be elevated above the base flood elevation or be flood-proofed in the case of non-residential buildings; and lays out special requirements for construction in the Special Flood Hazard Area.</p>				
Wellhead Protection	Yes	Town Code, Chapter 73, Zoning. 1/7/78	Local	Code Enforcement Officer, Planning Board
<p>The zoning ordinance creates an Aquifer Special District. General requirements for all Aquifer District Zones include obtaining an operations permit for all currently existing nonconforming developments within all Aquifer Zones. The area lying within the boundaries of a wellhead protection zone is designated as a sensitive environmental area.</p>				
Emergency Management Ordinance	No			
Climate Change Ordinance	No			
Other: (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	Yes	Town Code, Chapter 36, Excavations. 10/16/89	Local	Zoning Board of Appeals
<p>The ordinance provides for the control and general regrading of land and extraction and removal of products so as to prevent serious damage to public health, welfare, safety, etc. The regrading, relocation, extraction, or removal of more than 1,000 tons of earth soil or products within a twelve-month period shall only be permitted after a special permit is secured by application through the Zoning Board of Appeals.</p>				
Planning Documents				
General/Comprehensive Plan	Yes	Comprehensive Plan, 2016	Local	Town Board, Planning Board
<p>The goals of the plan include maintaining the quality of the Town’s residential areas, directing sensitive development of Chenango’s future neighborhoods by emphasizing considerations regarding residential density, water quality, and public facilities; providing a broader range of housing opportunities for residents; promoting continued commercial growth along the Front Street and Route 12A corridors, while focusing on its ordered and integrated development; meeting the community’s public facility’s needs, concentrating on the phased development of public sewage disposal systems and domestic water supply systems; and developing additional, diversified public recreation areas.</p> <p>The Plan includes a Natural Resources inventory to direct land use decisions. This inventory includes wetlands, soils, floodplains, aquifers, and slopes. Maps of these sensitive areas are included as part of the plan and are meant to guide development decisions.</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Capital Improvement Plan	No			
Disaster Debris Management Plan	No			
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	Yes	Town Code, Chapter 39, Flood Damage Prevention. 3/26/1987	Federal, State, County, and Local	Ordinance Administrator/Building Inspector
<p>It is the purpose of the ordinance to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> G. Regulate uses which are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities. H. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. I. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. J. Control filling, grading, dredging, and other development which may increase erosion or flood damages. K. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. L. Qualify for and maintain participation in the National Flood Insurance Program. <p>The ordinance allows the City to require certificates of elevation, with deficiencies resulting in a stop work order; require anchoring of all new construction and substantial improvements; requires all new constructions and substantial improvements to be elevated above the base flood elevation or be flood-proofed in the case of non-residential buildings; and lays out special requirements for construction in the Special Flood Hazard Area.</p>				
Stormwater Management Plan	Yes	Town Code, Chapter 57b, Stormwater Management and Erosion and Sediment Control. 5/7/07	Local	Stormwater Management Officer
<p>The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings in § 57B-2 hereof. This chapter seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> A. Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised; B. Require land development activities to conform to the substantive requirements of the New York State Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; C. Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels; D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; E. Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and F. Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety. 				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
The Stormwater Management Officer will review all stormwater pollution prevention plans and forward such plans to the applicable municipal board.				
Open Space Plan	No			
Urban Water Management Plan	No			
Habitat Conservation Plan	No			
Economic Development Plan	No			
Community Wildfire Protection Plan	No			
Community Forest Management Plan	No			
Transportation Plan	No			
Agriculture Plan	No			
Climate Action/ Resiliency/Sustainability Plan	No			
Tourism Plan	No			
Business/ Downtown Development Plan	No			
Other (for example NYRCR, etc.)				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYSDHSES
This portion of the CEMP addresses the State's overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA's five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Continuity of Operations Plan	Yes	Emergency Operations Plan, 2/14/2008	County	Broome County Emergency Management
The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No			
Threat & Hazard Identification & Risk Assessment	No			
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	Local and state	
This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<p>A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders.</p> <p>The PHRP will do the following:</p> <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and - provide an overview of the stakeholder planning group (SPG). 				
Other: Hazardous Materials Incident Response Plan	Yes	Broome County Emergency Medical Services System Hazardous Materials Incident Response Plan (2008)	County	County OEM
The purpose of the plan is the coordination of on-scene emergency medical care, transportation, and hospital treatment for victims of a hazardous materials emergency in Broome County.				





Development and Permitting Capability

Table 9.5-3 summarizes the capabilities of the Town of Chenango to oversee and track development.

Table 9.5-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Planning Board, Code Enforcement Officer, Zoning Board of Appeals
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	Yes	The Comprehensive Plan includes a Natural Resources inventory to direct land use decisions. This inventory includes wetlands, soils, floodplains, aquifers, and slopes. Maps of these sensitive areas are included as part of the plan and are meant to guide development decisions.
Describe the level of build-out in your jurisdiction.	N/A	

Administrative and Technical Capability

Table 9.5-4 summarizes potential staff and personnel resources available to the Town of Chenango and their current responsibilities that contribute to hazard mitigation.

Table 9.5-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board consists of five (5) members each with a five (5) year term of office. The Town Planning Board periodically modifies and updates the Town's Comprehensive Plan to approve plats (subdivision review) showing the layout of lots, roads, driveways, details of water and sewer facilities, streets, and other pertinent information in accordance with Town Law and state enabling statutes; approves site plans regarding how a particular parcel is developed or altered in accordance with Town Law and state enabling statutes; and advises the Zoning Board of Appeals regarding area variance requests, use variance requests and special permit requests.
Zoning Board of Appeals	Yes	The Zoning Board of Appeals consists of five (5) members each with a five (5) year term of office. Grants variances.
Planning Department	No	
Mitigation Planning Committee	Yes	Inactive
Environmental Board/Commission	Yes	Ordinance
Open Space Board/Committee	No	



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Economic Development Commission/Committee	No	
Public Works/Highway Department	Yes	Ensure that all residents, visitors, business owners, and the general traveling public have access to safe and travelable roadways.
Construction/Building/Code Enforcement Department	Yes	Upholds and enforces Codes and Standards established to protect the Public Health, Safety, and Welfare of all residents, business owners, and visitors.
Emergency Management/Public Safety Department	No	
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department and Storm Water Management Department conduct maintenance.
Mutual aid agreements	Yes	Highway Department
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	
Other		
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Building Code Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Code Department
Planners or engineers with an understanding of natural hazards	Yes	Building Code Department, Highway Department
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments.	Yes	Code officials and Town Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Building Code Department
Environmental scientists familiar with natural hazards	No	
Surveyor(s)	No	
Emergency Manager	No	
Grant writer(s)	No	
Resilience Officer	No	
Other: NFIP Floodplain Administrator (FPA)	Yes	Ordinance/Code Enforcement
Administrative/technical capability self-assessment		
Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.		



Fiscal Capability

Table 9.5-5 summarizes financial resources available to the Town of Chenango.

Table 9.5-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes
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])	

Education and Outreach Capability

Table 9.5-6 summarizes the education and outreach resources available to the Town of Chenango.

Table 9.5-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	
Personnel skilled or trained in website development		
Hazard mitigation information available on your website	Yes	The town has a Flood Recovery page on the town website listing resources for residents, including preparedness guidelines and FEMA resources.
Social media for hazard mitigation education and outreach		
Citizen boards or commissions that address issues related to hazard mitigation		
Warning systems for hazard events		
Natural disaster/safety programs in place for schools		
Organizations that conduct outreach to socially vulnerable populations and underserved populations		
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events		



Community Classifications

Table 9.5-7 summarizes classifications for community programs available to the Town of Chenango.

Table 9.5-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	9	2017
Building Code Effectiveness Grading Schedule (BCEGS)	No		
Public Protection (ISO Fire Protection Classes 1 to 10)	No		
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No		
National Weather Service Storm Ready Certification	No		
Firewise Communities classification	No		
Other			

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.5-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.5-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate



9.5.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.5-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.5-9 summarizes the NFIP statistics for the Town of Chenango.

Table 9.5-9. Town of Chenango NFIP Summary of Policy and Claim Statistics

# Policies	0
# Claims (Losses)	0
Total Loss Payments	\$0
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0
# RL/SRL Properties Within the 1% Annual Chance Flood Boundary	0
# RL/SRL Properties Within the 0.2% Annual Chance Flood Boundary	0

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: _____

Flood Vulnerability Summary

Table 9.5-10 provides a summary of the NFIP program in the Town of Chenango.

Table 9.5-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	<ul style="list-style-type: none"> Wallace Road/Morningside area - repetitive flash flooding issues. Frederick Road/Chenango Bridge area - flash flooding in high water events. Fuller Road/Nimmonsburg area - repetitive flash flooding issues.





NFIP Topic	Comments
Do you maintain a list of properties that have been damaged by flooding?	The properties that have been damaged by flooding are not on a town-specific list.
Do you maintain a list of property owners interested in flood mitigation?	Yes, we do as we participate in CRS.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	The Town of Chenango uses FEMA guidelines and local ordinances.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	There was 1 substantially damaged property during the July 2021 flash flood.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	There are no town-owned mitigated properties at this time. There are at least 2 privately funded properties in the flood plain that have been elevated.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes.
NFIP Compliance	
What local department is responsible for floodplain management?	Ordinance Department.
Are any certified floodplain managers on staff in your jurisdiction?	Yes, Gavin Stiles.
Do you have access to resources to determine possible future flooding conditions from climate change?	National Weather Service databases.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	We provide permit reviews, a flood page on our website, and education materials in the lobby. We do inspections for floodplain projects.
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either before the improvement or repair is started or the structure has been damaged and is being restored before the damage occurred. Substantial improvement is considered to comment when the first alteration of any wall, ceiling, floor, or other structural part of the building commences.
What are the barriers to running an effective NFIP program in the community, if any?	There are none.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown.



NFIP Topic	Comments
What is the local law number or municipal code of your flood damage prevention ordinance?	L.L. No. 2, 1987
What is the date that your flood damage prevention ordinance was last amended?	1987
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets minimum requirements.
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	<p>From L.L. No. 2, 1987:</p> <p>A. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level. As the lot size increases beyond the 1/2 acre, the technical justification required for issuing the variance increases.</p> <p>B. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures and contributing structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the contributing procedures set forth in the remainder of this section.</p> <p>C. Variances may be issued by a community for new construction and substantial improvements and other developments necessary for the conduct of a functionally dependent use, provided that:</p> <p>(1) The criteria of Subsections A, D, E, and F of this section are met.</p> <p>(2) The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threat to public safety.</p> <p>D. Variances shall not be issued within any designated floodway if any increases in flood levels during the base flood discharge would result.</p> <p>E. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.</p> <p>F. Variances shall only be issued upon receiving written justification of:</p> <p>(1) A showing of good and sufficient cause.</p> <p>(2) A determination that failure to grant the variance would result in exceptional hardship to the applicant.</p> <p>(3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.</p>



NFIP Topic	Comments
	G. Any applicant to whom a variance is granted for a building with the lowest floor below the base flood elevation shall be given written notice that the cost of flood insurance will be commensurate with the increased risk resulting from the lowest floor elevation.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	We are currently a CRS community with a rating of 9. Yes, we would be interested in improving.

9.5.5 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 9.5-11 through Table 9-13.

Table 9.5-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	9	0	16	25
Permits within SFHA	0	0	0	0
2020				
Total Permits	8	0	11	19
Permits within SFHA	0	0	1	0
2021				
Total Permits	3	0	4	7
Permits within SFHA	1	0	0	1
2022				
Total Permits	5	0	1	6
Permits within SFHA	0	0	1	1
2023				
Total Permits	0	0	1	1
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9-12. Recent Major Development and Infrastructure from 2018 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
MG Gas & Food Mart	Commercial		1429 Upper Front St 112.09-1-2 1427 Upper Front St 112.09-1-3	None	Building a new gas and convenience store

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





Table 9-13. 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

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

9.5.6 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 Town of Chenango’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.5-1 through Figure 9.5-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which Chenango has significant exposure. The maps show the location of potential new development, where available.



Figure 9.5-1. Town of Chenango Hazard Area Extent and Location Map 1

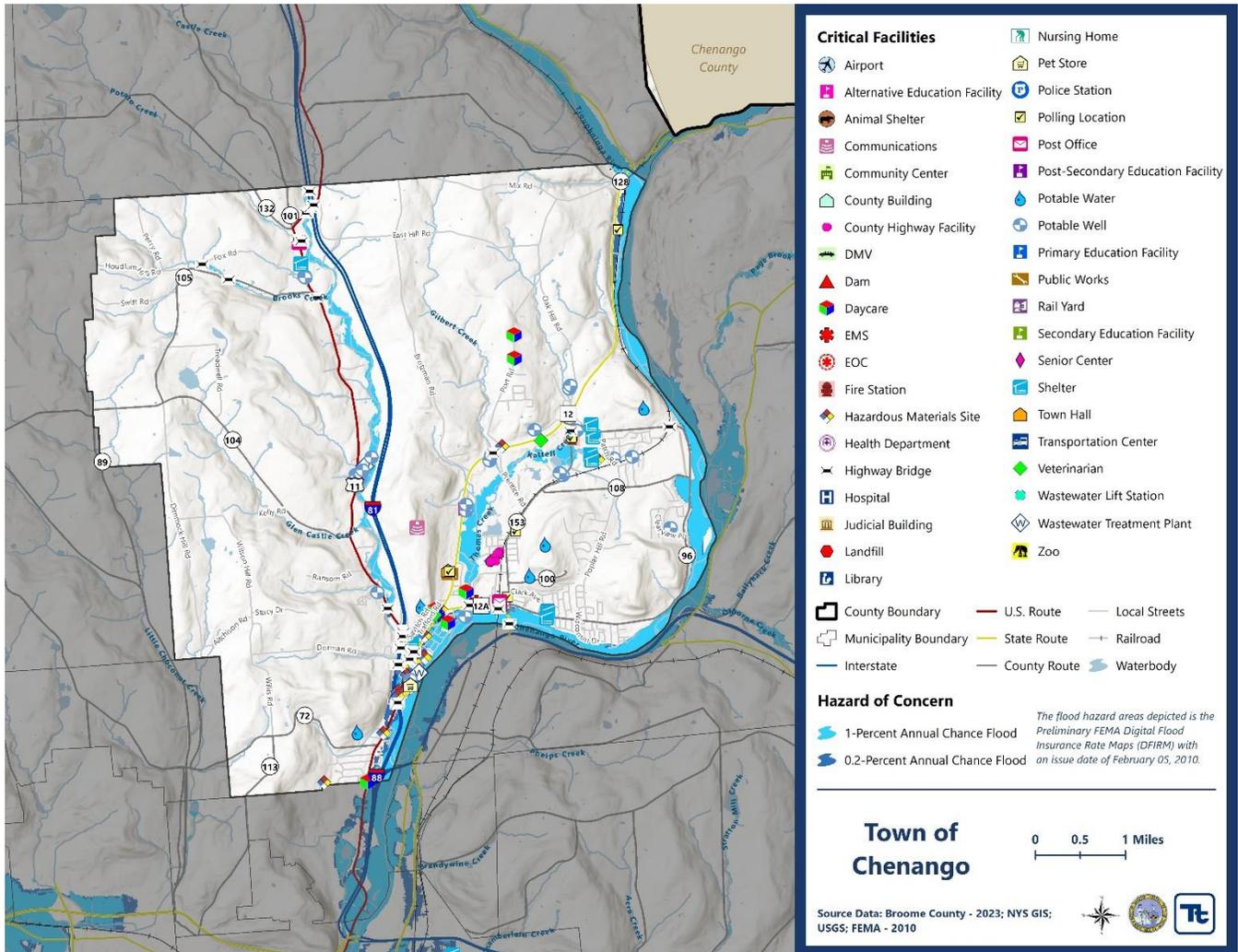
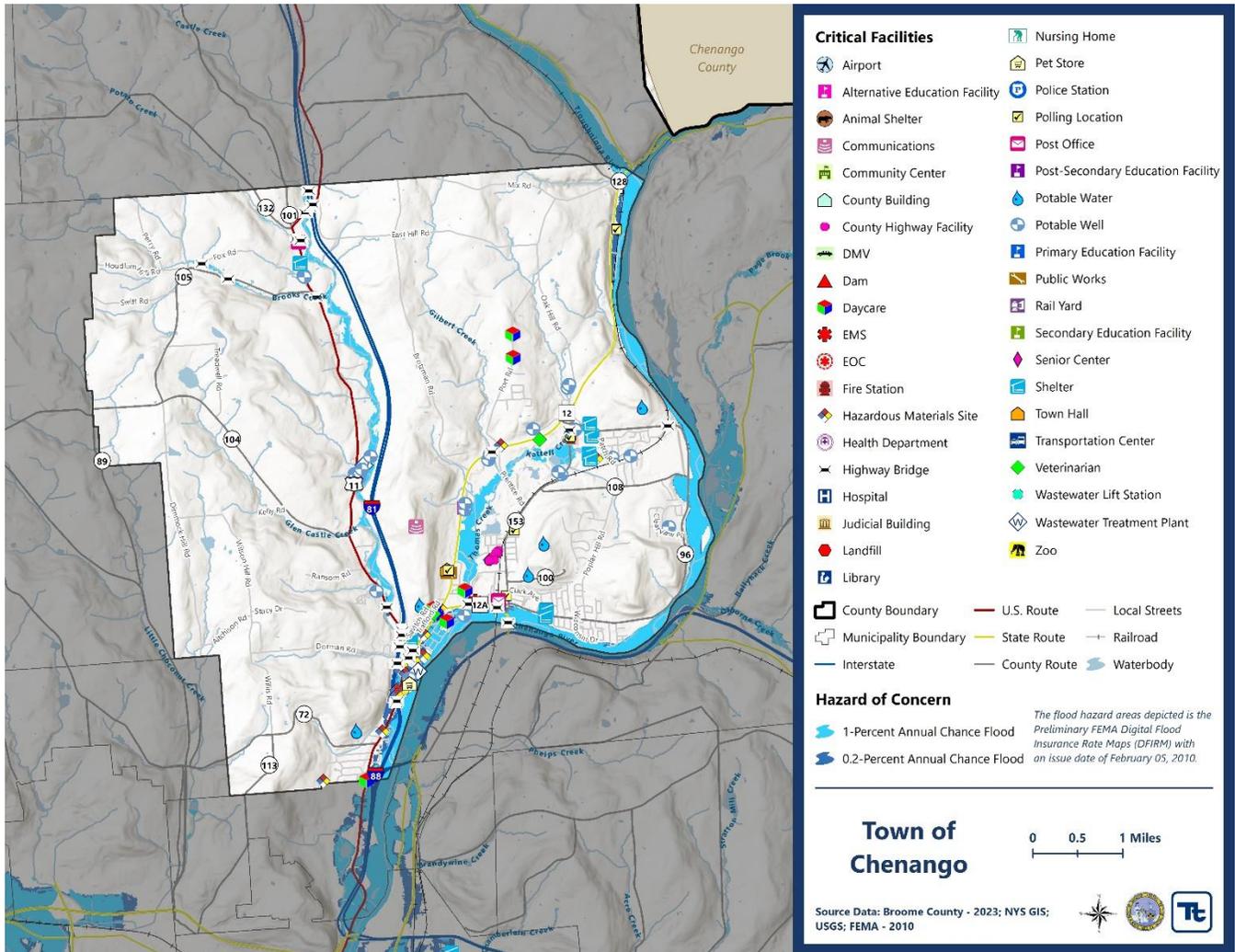




Figure 9.5-2. Town of Chenango Hazard Area Extent and Location Map 2





Hazard Event History

The history of natural and non-natural hazard events in the Town of Chenango is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.5-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.5-14. Hazard Event History in the Town of Chenango

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Chenango.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Chenango 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 Town did not indicate any changes.

Table 9.5-15. Hazard Ranking

Hazard	Rank
Dam/Levee	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.5-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.5-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage		
BINGHAMTON CHRYSLER JEEP DODGE	Hazardous Materials Facility	N	Y				
JAI RAVI INC	Hazardous Materials Facility	N	Y				
VALVOLINE LLC 020007	Hazardous Materials Facility	N	Y				
Kattelville Athletic	Polling Location	N	Y				
Bridge_1008201	Highway Bridge	N	Y				





Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage		
Bridge_1008202	Highway Bridge	N	Y				

Source: XXXX

In addition to critical facilities that are exposed to flooding, there are no high-hazard dams located in or that could impact the Town of Chenango.

Identified Issues

After review of the Town of Chenango’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Chenango identified the following vulnerabilities within their community:

- The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery regarding dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperature, floods, invasive and nuisance species, severe storms, severe winter storm, and wildfire utilizing a variety of outreach methods.
 - Single POE Roads that have historical damages: John Smith Rd, Willette Park Rd, Water St, Fox Rd, Kelly Rd, Parsons Rd.
 - Single POE Roads that may be vulnerable to other hazards: All dead ends off of Front St and Kattelville Rd.
 - Town of Chenango Complex has no backup power
 - Previous reported areas of concern which include the Wallace Rd area.
- Wallace Rd./Smith Hill area has a small unnamed creek that flows into a closed drainage system. In flash flood events this creek has jammed at the mouth of the pipe and various points in the creek system prior to the pipe. This diverts the water and sticks, creek gravel, and other debris into several neighborhood streets. There have been up to 30 homes damaged during different flooding events.
- The Fuller Rd. area has a small unnamed creek that flows down an embankment, under Grant Rd. into a closed pipe system that runs under the I-81. Heavy rain events have caused the creek and pipes to plug sending water into the home on Fuller Rd. There have been numerous water rescues from that address due to repetitive flooding.
- Frederick Rd. has a closed drainage system that has collapsed and plugged during larger flooding events. There are several homes at the end of Frederick Rd. that take on water.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*





9.5.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.5-17 indicates progress on the Town'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.

Additional Mitigation Efforts

The Town of Chenango did not identify any additional mitigation efforts completed since the last HMP.



Table 9.5-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Chenango-1	Frederick Road Stormwater Upgrades	Flood, Severe Storm	Town Engineer, Highway Department	Problem: Frederick Road is prone to flooding, resulting in road closures and possible damages to properties. The town is completing a hydrologic analysis of Frederick Road. Solution: The completion of the hydrologic study will allow for engineering and construction to be conducted to address the flooding issues. Likely construction may include culvert and Stormwater upgrades.	Ongoing Capability. A hydrological study was approved by the Town Board.	Project to be included in 2024 HMP.
T. Chenango-2	Town-wide Stream Maintenance Education Program	Flood, Severe Storm	Town Highway Department with support from County SWCD	Problem: There is currently no formal public education and outreach program to inform residents on proper stream management practices, permitting processes, or which agencies to talk with when there are questions. A town-wide program is needed to alleviate this problem. Considerable town resources are devoted to answering public inquiries on this subject. Solution: The town will develop public outreach materials to educate residents about stream management, which agencies have jurisdiction, and stream cleanup after flash flood events. Outreach materials will include the development of a flyer, website postings, etc. The town will work with appropriate county and state agencies (SWCD, Broome-Tioga Stormwater, NYS DEC) to help develop and support outreach.	No Progress. Newer employees will be tasked with learning and updating programs.	Project to be included in 2024 HMP.



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T. Chenango-3	Grant Road Drainage	Flood, Severe Storm	Town Supervisor with support from the homeowners	<p>Problem: The area of Grant Road and Booth Road repeatedly floods, impacting one home. The structure is not in the 100-year floodplain but has been damaged and requires evacuations several times. While work has been done in this area, replacement of the large culvert drainage pipe twice has not been effective, and this area is still prone to flooding and damage. The cost of replacement of the pipe was \$55,000 each time.</p> <p>Solution: The town will buy out and demolish the impacted property, preventing future damages and lowering the need for municipal response.</p>	No Progress. Discussion is ongoing.	Project to be included in 2024 HMP.
T. Chenango-4	Smith Hill Creek (Wallace Road) Stormwater Management System	Flood, Severe Storm	Town of Chenango DPW; BC Highway, NYS DOT	<p>Problem: The stormwater system needs upgrades. Numerous homes have been flooded both during the 2006 flood and the 2011 flood Currently replacing pipes.</p> <p>Solution: A storm sewer system will be installed connecting the upper portion of Wallace Rd with the State’s storm system on US Route 11. Several catch basins will also be installed along the system. This storm system will alleviate flooding from the unnamed creek that flows between Wallace Rd and Smith Hill Rd.</p>	Ongoing Capability. An HMGP application was submitted in 2022 to install a trash rack at the head of the unnamed stream. The application was approved in 2023.	Project to be included in 2024 HMP.
T. Chenango-5	Northgate Plaza Flap Gate	Flood, Severe Storm	DPW	<p>Problem: Flap gate necessary to prevent backflow. The property is privately owned, and the Town does not have jurisdiction to complete the project.</p> <p>Solution: Install flap gates and replace pipes in the stormwater management system beneath Northgate Plaza. Construct retention wall between Weis Market site and Waste Water Treatment Plant</p>		
T. Chenango-6	Town Hall Backup Generator	All Hazards	Town Supervisor	<p>Problem: Town Hall lacks a backup generator.</p> <p>Solution: The town will install a backup generator with a permanent fuel storage tank at the town hall to ensure the provision of essential services and provide support for all aspects of municipal functionality during a disaster.</p>	Complete. A generator was installed that powers the entire town complex.	Discontinue, completed.
T. Chenango-7	Create and maintain a command center for disaster	All Hazards	Town of Chenango Town Board	<p>Problem: The town needs a disaster command center capable of housing first responders</p> <p>Solution: The Center will have dedicated communications, backup power, and all necessary support services. Upon completion, the town will consider joining the Storm Ready Program</p>	No Progress	Discontinue. The project has been deprioritized.



	response at Town Hall.					
T. Chenango-8	Natural Hazard Education Program	All Hazards	Town of Chenango Hazard Mitigation Chair	Problem: Residents need more education on natural hazards Solution: A pamphlet about natural hazards will be made available. The pamphlet will be reviewed as part of CRS.	No Progress	Project to be included in 2024 HMP.
T. Chenango-9	Purchase, relocate, or elevate structures located in hazard-prone areas.	All Hazards	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from BCPD, NYSOEM, FEMA	Problem: Broad Acres, Front Street, and Chenango Bridge areas and Route 12. (look at alternatives to floodproof). Solution: Phase 1: Identify appropriate candidates for relocation or elevation based on cost-effectiveness versus retrofitting. Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match	No Progress	Project to be included in 2024 HMP.
T. Chenango-10	Improve post-disaster capabilities	Flood	Town of Chenango Hazard Mitigation Chair	Problem: The town lacks post-disaster procedures for assessments and various FEMA paperwork Solution: Identify and develop agreements with entities that can provide support with FEMA/SOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/SOEM paperwork compilation, submissions, record-keeping	No Progress	Project to be included in 2024 HMP.
T. Chenango-11	Protect the Northgate Waste Water Treatment Plant to the 500-year flood level	Flood	Town Engineer	Problem: The facility is in a 100-year floodplain. Solution: The town will elevate electrical components.	Ongoing Capability	Project to be included in 2024 HMP.
T. Chenango-12	Protect the Northgate Well to the 500-year flood level	Flood	Town, facilities manager	Problem: The facility is in a 100-year floodplain. Solution: The town will elevate electrical components.	Ongoing Capability	Project to be included in 2024 HMP.
T. Chenango-13	Protect the Pennview Well to the	Flood	Town, facilities manager	Problem: The facility is in a 100-year floodplain. Solution: The town will elevate electrical components.	Ongoing Capability	Project to be included in 2024 HMP.



	500-year flood level					
T. Chenango-14	Protect the Route 12A Well to the 500-year flood level	Flood	Town, facilities manager	Problem: The facility is in the 100-year floodplain Solution: The town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	Ongoing Capability	Project to be included in 2024 HMP.
T. Chenango-15	Protect the Chenango Forks High School from the 500-year flood level	Flood	Town Floodplain Administrator working with facility operators/owners	Problem: The facility is in a 100-year floodplain. Solution: The town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	No Progress	Project to be included in 2024 HMP.
T. Chenango-16	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	Problem: The current flood damage prevention ordinance does not include NYS freeboard requirements although the Building Code does. Solution: The flood Damage Prevention Ordinance will be updated to include the freeboard requirement.	Ongoing Capability	Project to be included in 2024 HMP.



Proposed Hazard Mitigation Initiatives for the HMP Update

Chenango participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- FEMA 551 “Selecting Appropriate Mitigation Measures for Flood prone 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 Chenango 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 the Town’s priorities.

Table 9.5-18 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. Table 9.5-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.5-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure				X			X			
Disease Outbreak				X			X			
Drought				X			X			
Earthquake				X			X			
Extreme Temperature				X			X			
Flood				X			X			
Invasive and Nuisance Species				X			X			
Severe Storm				X			X			
Severe Winter Storm				X			X			
Wildfire				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 stormwater 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 9.5-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-ChenangoT-01	Town-wide Stream Maintenance Education Program	1	1	0	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-ChenangoT-02	Grant Road Drainage	1	1	0	1	1	1	0	1	0	1	1	1	1	1	11	High
2024-ChenangoT-03	Smith Hill Creek (Wallace Road) Stormwater Management System	1	1	0	1	1	1	0	1	0	1	1	1	1	1	11	High
2024-ChenangoT-04	Northgate Plaza Flap Gate	1	1	1	1	1	1	0	1	0	1	0	1	1	1	11	High
2024-ChenangoT-05	Natural Hazard Education Program	0	0	1	1	1	1	1	0	1	1	1	1	1	1	11	High
2024-ChenangoT-06	Acquisition and Relocation	1	1	1	1	0	0	0	1	0	1	0	0	0	1	7	Medium
2024-ChenangoT-07	Improve post-disaster capabilities	0	0	1	1	1	1	1	0	1	1	1	1	1	1	11	High
2024-ChenangoT-08	Protect Critical Hazardous Material facilities from the 500-year flood level	1	1	11	1	1	1	0	1	0	1	0	1	1	1	11	High
2024-ChenangoT-09	Update the NFIP Flood Damage Prevention Ordinance	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High

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



Action 2024-ChenangoT-01. Town-wide Stream Maintenance Education Program

Action Name:	2024-ChenangoT-01	
Description of the Problem:	There is currently no formal public education and outreach program to inform residents on proper stream management practices, permitting processes, or which agencies to talk with when there are questions. A town-wide program is needed to alleviate this problem. Considerable town resources are devoted to answering public inquiries on this subject.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will develop public outreach materials to educate residents about stream management, which agencies have jurisdiction over, and stream cleanup after flash flood events. Outreach materials will include the development of a flyer, website postings, etc. The town will work with appropriate county and state agencies	
Lead Agency:	Town Highway Department	
Supporting Agencies:	County SWCD	
Estimated Cost:	Low (< \$10,000)	
Potential Funding Sources:	Town budget, staff time.	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3	
Benefits:	Residents will have knowledge of stream management practices.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations, such as the elderly, will have access to resources to mitigate flooding from streams near their residences. They will also have access to municipal staff for any questions regarding stream maintenance and response.	
Impact on Critical Facilities/Lifelines:	Critical facilities located near streams will be protected against flooding and debris by the public having accurate information on stream maintenance practices.	





Impact of Capabilities:	This action will strengthen the public outreach and engagement capabilities between Town staff and residents.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change will increase the severity and frequency of flooding events. This can impact stream flooding and erosion. This action will consider climate change impacts to ensure the public has the most updated information on stream maintenance and protection.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Current methods remain the only ones used
	Rely on federal public outreach		Limited funding and reach
	Rely on state public outreach		Limited funding and reach, not tailored to town needs.



Action 2024-ChenangoT-02. Grant Road Drainage

Action Name:	2024-ChenangoT-02	
Description of the Problem:	The area of Grant Road and Booth Road repeatedly floods, impacting one home. The structure is not in the 100-year floodplain but has been damaged and requires evacuations several times. While work has been done in this area, replacement of the large culvert drainage pipe twice has not been effective, and this area is still prone to flooding and damage. The cost of replacement of the pipe was \$55,000 each time.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will buy out and demolish the impacted property, preventing future damage and lowering the need for municipal response. Additionally, the Town will conduct a feasibility study to determine the most cost-effective mitigation action to prevent flooding on Grant Road and Booth Road. Once the most feasible option is identified, the Town Supervisor will work with the Town Engineer to complete it.	
Lead Agency:	Town Supervisor	
Supporting Agencies:	Homeowners, Town Engineer	
Estimated Cost:	High	
Potential Funding Sources:	HMGP, BRIC	
Implementation Timeline:	Medium	
Goals Met:	1, 2, 3	
Benefits:	Eliminate flooding to one residential home which repeatedly floods despite costly flood mitigation efforts in place to protect the structure.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	Grant Road and Booth Road are critical for community members to access and evacuate during other hazard events. When a severe flood occurs, flood mitigation efforts to limit flood damage to these roads will ensure they are operable during such hazard events.	
Impact of Capabilities:	This action will strengthen the town's capabilities to respond to other hazard events by mitigating Grant Road and Booth Road, access roads, for first responders to reach the community.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change will increase the severity and frequency of severe storm and flood events. This action takes into consideration these flood	



	projections to mitigate future damage to residential homes and roadways.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Current methods remain the only ones used
	Remove roadway		Cost prohibitive; may reduce accessibility
	Raingardens		Does not provide enough flood protection



Action 2024-ChenangoT-03. Smith Hill Creek (Wallace Road) Stormwater Management System

Action Name:	2024-ChenangoT-03	
Description of the Problem:	The stormwater system needs upgrades. Numerous homes have been flooded both during the 2006 flood and the 2011 flood. Currently, pipe replacement is taking place.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	A trash rack will be installed connecting the upper portion of Wallace Rd with the State’s storm system on US Route 11. Several catch basins will also be installed along the system. This storm system will alleviate flooding from the unnamed creek that flows between Wallace Rd and Smith Hill Rd.	
Lead Agency:	Town of Chenango DPW	
Supporting Agencies:	BC Highway, NYS DOT	
Estimated Cost:	Low (< \$10,000)	
Potential Funding Sources:	Town budget, staff time	
Implementation Timeline:	Medium	
Goals Met:	1, 2, 3, 4	
Benefits:	Several homes and critical infrastructure will be protected from stormwater runoff and floods during severe storm events due to upgrades to the stormwater system.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations, such as the elderly or disabled, that reside within the homes that repeatedly flood due to stormwater runoff will be mitigated and protected. Additionally, the roadway that they utilize for evacuation will be mitigated to safely be accessible during a severe storm event.	
Impact on Critical Facilities/Lifelines:	Wallace and Smith Roads are critical roadways for the community to evacuate or maintain access. This project will ensure they are operable during a severe storm event.	
Impact of Capabilities:	This action will maintain EMS and first responders' capabilities to access the community members in times of emergencies by mitigating flooding on Wallace and Smith Roads.	
Impact on Future Development:	Future development planned for this area will be further protected from stormwater runoff and flood events.	





Climate Change Considerations:	Climate change will increase the severity and frequency of severe storms and flood events. This action takes into consideration flood and severe storm projections for future mitigation against these hazard events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No Action	Current methods remain the only ones used	
	Remove roadway	Expensive; may reduce accessibility	
	Remove homes	Expensive and time-consuming; potentially limited political or public support	



Action 2024-ChenangoT-04. Northgate Plaza Flap Gate

Action Name:	2024-ChenangoT-04		
Description of the Problem:	A flap gate is necessary to prevent backflow. The property is privately owned, and the Town does not have jurisdiction to complete the project.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will work with the property owner to install flap gates and replace pipes in the stormwater management system beneath Northgate Plaza. Additionally, the Town will construct a retention wall between the Weis Market site and the Wastewater Treatment Plant.		
Lead Agency:	Town of Chenango DPW		
Supporting Agencies:	Property owner		
Estimated Cost:	Medium		
Potential Funding Sources:	Town budget, staff time, HMGP		
Implementation Timeline:	Medium		
Goals Met:	1, 2		
Benefits:	Flap gates will prevent backflow onto private property.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	The stormwater management system is a critical lifeline to prevent stormwater runoff on private properties nearby. This action would prevent backflow from occurring during a severe flood event which could cause extensive property damage.		
Impact of Capabilities:	This action would strengthen the stormwater management capabilities provided by the Town.		
Impact on Future Development:	Future development planned in and around this stormwater management system will be protected against backflow and flood concerns.		
Climate Change Considerations:	Climate change will increase the severity and frequency of severe storm and flood events. This action considers the future impacts to the stormwater management system and the properties based on flood and severe storm projections.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action	Current methods remain the only ones used
	Remove the Plaza	Limited political or public support
	Elevate the Plaza	Cost-prohibitive



Action 2024-ChenangoT-05. Natural Hazard Education Program

Action Name:	2024-ChenangoT-05	
Description of the Problem:	The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery regarding dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperature, floods, invasive and nuisance species, severe storms, severe winter storms, and wildfire utilizing a variety of outreach methods.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.	
Lead Agency:	Town of Chenango Hazard Mitigation Chair	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	<i>Town Budget, Staff Time</i>	
Implementation Timeline:	Short	
Goals Met:	1,2,3,4	
Benefits:	The public will have more knowledge of the different types of natural hazards that threaten the Town so that they may be more aware and can plan/respond to these hazards.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations, such as the elderly or disabled, may not have access to natural hazard information. This pamphlet is a great	



	way for these residents to be able to access natural hazard information without having to have access to Wi-Fi or technology.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action will strengthen the town's public outreach and education capabilities.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate Change will increase the severity and frequency of natural hazard events, such as flooding and severe storms. Educating the public on these future projects is important in preparation to mitigate and respond to these events.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Current methods remain the only ones used
	Have available as a digital flyer		A digital flyer may not be accessible to all
	Rely on federal/state education materials and training		Resources may be generalized and not specific to the risks in the Town



Action 2024-ChenangoT-06. Acquisition and Relocation

Action Name:	2024-ChenangoT-06	
Description of the Problem:	Broad Acres, Front Street, Chenango Bridge areas, and Route 12 are all prone to repeated severe flooding. The Town has been looking at alternatives to floodproof these structures.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will identify appropriate candidates for relocation or elevation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, the Town will work with property owners toward implementation of that action based on available funding from FEMA and local match.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Town Engineer, BCPD, NYSDHSES, FEMA	
Estimated Cost:	TBD	
Potential Funding Sources:	HMGP, Town budget, Staff time	
Implementation Timeline:	TBD	
Goals Met:	1, 2, 3, 4	
Benefits:	Broad Acres, Front Street, Chenango Bridge areas, and Route 12 will be protected against repeated flooding events that occur regularly.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations, such as the elderly or disabled, who reside in these areas that experience repeated flooding will be protected either through floodproofing measures or acquisition and relocation.	
Impact on Critical Facilities/Lifelines:	Critical facilities, such as roadways, bridges, etc. will be protected from repeated flooding through floodproof actions.	
Impact of Capabilities:	This action will strengthen the town's capabilities to respond to flood events by maintaining critical infrastructure that EMS and first responders will need to use to access residents nearby. Additionally, through acquisition and relocation, there will be less stress on EMS and first responders to residents in flood-prone areas as they will be relocated to non-flood-prone areas.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change will increase the severity and frequency of flood events. This action considers the future flooding events in an already flood-prone area.	



Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No Action	Current methods remain the only ones used	
	Elevate all structures	Cost-prohibitive and time-intensive	
	Remove Route 12	Cost-prohibitive; may reduce accessibility	



Action 2024-ChenangoT-07. Improve post-disaster capabilities

Action Name:	2024-ChenangoT-07	
Description of the Problem:	The Town lacks post-disaster procedures for assessments and various FEMA paperwork.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will Identify and develop agreements with entities to improve post-disaster capabilities. These entities will be able to support FEMA/SOEM paperwork after disasters. Personnel will include qualified damage assessment personnel to assist more specifically with FEMA/SOEM paperwork compilation, submissions, and record-keeping.	
Lead Agency:	Town of Chenango Hazard Mitigation Chair	
Supporting Agencies:	N/A	
Estimated Cost:	Low (< \$10,000)	
Potential Funding Sources:	Town budget, staff time	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3	
Benefits:	The Town will have enhanced post-disaster capabilities.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	The town's post-disaster capabilities will be strengthened, more specifically with FEMA/SOEM paperwork compilation, submissions, and record-keeping.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change will increase the severity and frequency of natural hazard events, such as flooding. This action will assist with the post-disaster response and funding for the Town for future events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Current methods remain the only ones used





	Hire in-house staff to be responsible	Expensive; funding may be grant funds and not consistent over time
	Rely on FEMA	May become time-consuming and not tailored to Town's needs



Action 2024-ChenangoT-08. Protect Critical Hazardous Material facilities from the 500-year flood level

Action Name:	2024-ChenangoT-08		
Description of the Problem:	The following critical facilities were identified as being located in the 500-year flood level: Binghamton Chrysler/Jeep/Dodge, Jai Ravi, Inc., Valvoline LLC, and Kattelville Athletic.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will explore funding availability to elevate or relocate privately owned hazardous material facilities so that they are not compromised during a flood event.		
Lead Agency:	Town Administration		
Supporting Agencies:	Facility managers		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	Town budget, HMGP, BRIC		
Implementation Timeline:	Short		
Goals Met:	1, 2		
Benefits:	These hazardous material facilities will be protected against flooding which would ensure that hazardous material spills will be prevented.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations, such as the elderly or disabled, living near these facilities that house hazardous materials will not be exposed to hazardous material spills in the event of a flood.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	N/A		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change will impact the severity and frequency of flood events. This action takes into consideration future flood impacts on these hazardous material facilities.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action	Current methods remain the only ones used
	Deploy flood-barriers	May not be able to handle extreme events
	Build a levee around these facilities	Cost-prohibitive and may take a long time to implement



Action 2024-ChenangoT-09. Update the NFIP Flood Damage Prevention Ordinance

Action Name:	2024-ChenangoT-09		
Description of the Problem:	The current flood damage prevention ordinance does not include NYS freeboard requirements although the Building Code does.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Flood Damage Prevention Ordinance will be updated to include the freeboard requirement.		
Lead Agency:	Floodplain Administrator		
Supporting Agencies:	N/A		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	Town budget, staff time		
Implementation Timeline:	Short		
Goals Met:	1, 2		
Benefits:	FDPO will be updated to include NYS freeboard requirements.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations, such as the elderly, will be protected against flooding damage if residential homes adhere to the NYS freeboard requirements.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action will lessen the damage to structures from floods if they adhere to the NYS freeboard requirements, which would allow easier access for EMS and first responders in the event of an emergency during a flood event.		
Impact on Future Development:	Future development will be built with the NYS freeboard requirement which would decrease the impacts from flood events.		
Climate Change Considerations:	Climate change will increase the severity and frequency of flood events. Updating the FDPO to include the NYS freeboard requirement will lessen the damage from future flood impacts.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation



SECTION 9.5. Town of Chenango

	No Action	Current methods remain the only ones used
	Rely on private homeowners	The outcome depends on homeowners' willingness or the current situation
	Rely on state	May take a long time to implement





9.6 TOWN OF COLESVILLE

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

9.6.1 Hazard Mitigation Planning Team

The Town of Colesville identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.6-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Glenn Winsor, Supervisor Address: 780 Welton Street, PO Box 27, Harpursville, NY 13787 Phone Number: (607) 693-1794 Email: colesvillesupervisor@echoes.net	Name/Title: Bradford McAvoy, Enforcement Officer Address: 780 Welton Street, PO Box 27, Harpursville, NY 13787 Phone Number: (607) 693-1795 Email: colesvilleenforcement@echoes.net
NFIP Floodplain Administrator	
Name/Title: Bradford McAvoy, Enforcement Officer Address: 780 Welton Street, PO Box 27, Harpursville, NY 13787 Phone Number: (607) 693-1795 Email: colesvilleenforcement@echoes.net	
Additional Contributors	
Name/Title: James Bulger, Highway Superintendent Method of Participation: Assessed hazard rankings; assisted in the review of Town capabilities	
Name/Title: Bradford McAvoy, Enforcement Officer Method of Participation: Completed hazards of concern review; completed NFIP Administration survey; submitted building permits and new development worksheet; assisted in review of Town capabilities	
Name/Title: Glenn Winsor, Supervisor Method of Participation: Assessed hazard and adaptive capacity rankings; assisted in the review of Town capabilities	

9.6.2 Municipal Profile

The Town of Colesville is located in the northeastern part of Broome County, NY, and is northeast of Binghamton. The Town includes the communities and hamlets of Belden, Center Village, Doraville, Harpursville, New Ohio, Nineveh, North Colesville, Ouaquaga, Sanitaria Springs, and West Colesville. The





Town of Colesville has a total area of 79.2 square miles. The Town of Colesville is located in the northeastern part of Broome County, NY, northeast of Binghamton. The north town line is the border of Chenango County and the Susquehanna River flows south through the town (Tetra Tech 2019).

Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Colesville is governed by a Supervisor and four council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Colesville was 4,868, a 7 percent decrease from the 2010 Census.

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 2020 U.S. Census indicates that 3.4 percent of the population is 5 years of age or younger, 24.8 percent is 65 years of age or older, 0.0 percent is non-English speaking, 7.1 percent is below the poverty threshold, and 16.7 percent is considered disabled.

9.6.3 Jurisdictional Capability Assessment and Integration

The Town of Colesville 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Colesville to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.



Planning, Legal, and Regulatory Capability and Integration

Table 9.6-2 summarizes the planning and regulatory tools that are available to the Town of Colesville. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.6-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Local Law (LL) 3, 2022: Town of Colesville Building and Fire Code, Administration and Enforcement Local Law	State and Local	Code Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This local law provides for the administration and enforcement of the New York Uniform Fire Prevention and Building Code and the State Energy Conservation Construction Code in the Town. It includes the creation of an office of the Code Enforcement Officer; institutes building permit requirements; outlines instruction inspection provisions; and mandates Certificates of Compliance.				
Zoning/Land Use Code	Yes	LL 2, 1984: Land Use Local Law	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The intent of this Local Law is to support the goal of the Town of Colesville to be primarily a rural residential community, in which agricultural and recreational development is encouraged along with planned supporting commercial services and compatible industrial development. The specific objectives are: <ul style="list-style-type: none"> To promote the most appropriate use of land resources. To provide appropriate recreational areas, public and private. To regulate and discourage uses not compatible with, or detrimental to the safety, health, attractiveness, and general well-being of the Town. 				
Subdivision Code	Yes	Local Law, December 5, 1991: Land Subdivision Regulations	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This ordinance states that land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health, or peril from fire, flood, or other menaces; that proper provision shall be made for drainage, water supply, sewerage, and other needed improvements; that all proposed lots will be laid out and of a size as to be in harmony with the development pattern of the neighboring properties; that the proposed streets shall compose a convenient system conforming to the Official Map, if any, and shall be properly related to the proposals shown on the Master Plan, if any, and shall be of such width, grade and location as to accommodate the prospective traffic, to facilitate fire protection and to provide access of fire-fighting equipment to buildings; and that proper provision shall be made for open spaces for parks and playgrounds. The subdivider must study environmental impacts and ensure adequate drainage, including addressing surface and spring water, remediate potential runoff, and study downstream impact.				
Site Plan Code	Yes	LL 2, 1984: Land Use Local Law	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town Planning Board is authorized by the Town Board to conduct site plan reviews. The Planning Board shall have the authority to approve, approve with conditions, or disapprove site plans where such review is required. When site plan review is mandated, approval by the Planning Board is required before any building permit or certificate of occupancy shall be issued.				
Stormwater Management Code	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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	Yes	LL 4, 1989: Environmental Quality Review, Local Law Rescinding; 6 NYCRR part 617, 2018	State and Local	All Town Agencies
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The regulations set forth in 6 NYCRR Part 617 implementing the provisions of the State Environmental Quality Review Act (SEQR) provide the regulatory framework for and govern the implementation of SEQR by all agencies of the Town of Colesville.				
The basic purpose of SEQR is to incorporate the consideration of environmental factors into the existing planning, review, and decision-making processes of state, regional, and local government agencies at the earliest possible time. To accomplish this goal, SEQR requires that all agencies determine whether the actions they directly undertake, fund, or approve may have a significant impact on the environment, and, if it is determined that the action may have a significant adverse impact, prepare or request an environmental impact statement.				
Flood Damage Prevention Ordinance	Yes	LL 3 of 1992: Flood Damage Prevention Local Law	Federal, State, County, and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
It is the purpose of the ordinance to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:				
<ul style="list-style-type: none"> A. Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities. B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. D. Control filling, grading, dredging, and other development which may increase erosion or flood damages. E. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. F. Qualify for and maintain participation in the National Flood Insurance Program. 				
The ordinance allows the Town to require certificates of elevation, with deficiencies resulting in a stop work order; require anchoring of all new construction and substantial improvements; requires all new constructions and substantial improvements to be elevated above the base flood elevation or be flood-proofed in the case of non-residential buildings; and lays out special requirements for construction in the Special Flood Hazard Area.				
Wellhead Protection	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other:	Yes	LL 1, 1991: Notice of Dangerous Conditions Local Law; LL 2, 1987: Unsafe Buildings Local Law	Local	Superintendent of Highways; Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Notice of Dangerous Conditions: Residents must provide written notifications of defects if they want to pursue legal recourse against the Town for dangerous conditions.				
Unsafe Buildings: Unsafe buildings pose a threat to human life and property in the Town of Colesville. Buildings and structures may become unsafe by reason of damage by fire, the elements, age, or general deterioration. Vacant buildings not properly secured at doorways and windows also serve as an attractive nuisance for young children who may be injured therein, as well as points of congregation by vagrants and transients. A dilapidated building may also serve as a place of rodent infestation thereby creating a health menace to the community. It is the purpose of this local law to provide for the safety, health, protection, and general welfare of persons and property in the Town of Colesville by requiring such unsafe residential, business, and industrial buildings to be repaired or demolished and removed.				
Planning Documents				
General/Comprehensive Plan	Yes	Town of Colesville Comprehensive Plan, 2015	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The 2015 Colesville Comprehensive Plan includes a discussion of working lands and agricultural areas, land use in the Town, housing conditions, an overview of infrastructure—including public safety—and a discussion of ecological areas, water resources, and other environmental resources.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	Yes	Broome County Agricultural Economic Development Plan, January 2019	County	Broome County Department of Planning & Economic Development
<p>The New York State Department of Agriculture and Markets requires recipients of Agricultural Protection Planning Program funds to identify lands that warrant protection measures as a result of their contribution to regional agricultural viability. In Broome County, this approach is two-fold:</p> <ul style="list-style-type: none"> • First, this analysis examines factors of environmental quality and countywide resiliency. Resiliency refers to the land’s ability to absorb and recover from shocks and stresses on agricultural production. For Broome County, flooding often causes these disruptions. • Second, this analysis examines vulnerability to development, defined here as the land’s exposure, susceptibility, or capacity for the conversion of agricultural land to other more intensive uses, such as residential or commercial development. 				
Climate Action/ Resiliency/Sustainability Plan	No			
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No			
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No			
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)				
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYSDHSES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>This portion of the CEMP addresses the State’s overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA’s five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.</p>				
Continuity of Operations Plan	Yes	Emergency Operations Plan, 2/14/2008	County	Broome County Emergency Management
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.</p>				
Substantial Damage Response Plan	No			
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Threat & Hazard Identification & Risk Assessment	No			
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	Local and state	
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.</p>				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following:</p> <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and <p>provide an overview of the stakeholder planning group (SPG).</p>				
Other: Hazardous Materials Incident Response Plan	Yes	Broome County Emergency Medical Services System	County	County OEM





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
		Hazardous Materials Incident Response Plan (2008)		
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of the plan is the coordination of on-scene emergency medical care, transportation, and hospital treatment for victims of a hazardous materials emergency in Broome County.</p>				

Development and Permitting Capability

Table 9.6-3 summarizes the capabilities of the Town of Colesville to oversee and track development.

Table 9.6-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Enforcement
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	Yes	A buildable land inventory is presented in the Town's Comprehensive Plan.
Describe the level of build-out in your jurisdiction.	N/A	Residential land: 49% of town (by acreage); vacant land: 32%; agricultural land: 14%; wild/forest and recreational land: 2.9%

Administrative and Technical Capability

Table 9.6-4 summarizes potential staff and personnel resources available to the Town of Colesville and their current responsibilities that contribute to hazard mitigation.

Table 9.6-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board consists of seven members who work closely with the Colesville Town Board and Broome County's Economic and Development Department for long-range planning matters that are consistent with the Town of Colesville Comprehensive Land Use Plan. Some of their responsibilities include: <ul style="list-style-type: none"> Review Site Plan Applications Issue Special Use Permits





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<ul style="list-style-type: none"> Land Development and Subdivision Reviews
Zoning Board of Appeals	Yes	The Zoning Board of Appeals (ZBA) decides on applications by landowners to permit buildings or land uses that vary from the Town's zoning regulations.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Town's Highway Department manages and maintains all Town roads.
Construction/Building/Code Enforcement Department	Yes	The Town has a Code Enforcement Department, which issues building permits and enforces the uniform construction code.
Emergency Management/Public Safety Department	No	While the Town does not have a Department of Public Safety, it does have public safety entities including the Colesville Volunteer Ambulance Service, Harpursville Fire Department, Sanitaria Springs Fire Company, and the West Colesville Fire Department.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Superintendent oversees maintenance activities.
Mutual aid agreements	Yes	Mutual aid for first response.
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other: Flood Committee	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Town Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town Engineer
Planners or engineers with an understanding of natural hazards	Yes	Town Engineer
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Grant writer(s)	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

Table 9.6-5 summarizes financial resources available to the Town of Colesville.

Table 9.6-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	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.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	

Education and Outreach Capability

Table 9.6-6 summarizes the education and outreach resources available to the Town of Colesville.

Table 9.6-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	Yes	The Town website has a Disaster Preparedness Plan link which leads to the New York State Citizen Preparedness Corps.
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	NY ALERT is available for residents to utilize.
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-





Outreach Resources	Available? (Yes/No)	Comment:
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.6-7 summarizes classifications for community programs available to the Town of Colesville.

Table 9.6-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	5	9/26/2016
Building Code Effectiveness Grading Schedule (BCEGS)	Yes*	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

* At the time of this plan update, classification information for the Town was unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.6-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.6-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Storm	Moderate





Hazard	Adaptive Capacity - Strong/Moderate/Weak
Severe Winter Storm	Moderate
Wildfire	Moderate

9.6.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.6-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.6-9 summarizes the NFIP statistics for the Town of Colesville.

Table 9.6-9. Town of Colesville NFIP Summary of Policy and Claim Statistics

# Policies	42
# Claims (Losses)	72
Total Loss Payments	\$1,753,810
# Repetitive Loss Properties (NFIP definition)	14

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.

Source: FEMA Region II October 2023

Flood Vulnerability Summary

Table 9.6-10 provides a summary of the NFIP program in the Town of Colesville.

Table 9.6-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	The area is adjacent to the Susquehanna River.
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	The town does not maintain a list of property owners.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	N/A
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No.
How do you make Substantial Damage determinations?	Follow the Building Code and Floodplain Local Law.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction?	1 property acquired; 6 properties elevated - owner covered.



NFIP Topic	Comments
<ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	
<p>Do your flood hazard maps adequately address the flood risk within your jurisdiction?</p> <ul style="list-style-type: none"> If not, state why. 	<p>The proposed maps have not been adopted from previous flood studies.</p>
NFIP Compliance	
<p>What local department is responsible for floodplain management?</p>	<p>Code Enforcement Department</p>
<p>Are any certified floodplain managers on staff in your jurisdiction?</p>	<p>The Floodplain manager has taken coursework to develop professional skills.</p>
<p>Do you have access to resources to determine possible future flooding conditions from climate change?</p>	<p>Yes.</p>
<p>Does your floodplain management staff need any assistance or training to support its floodplain management program?</p> <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	<p>No.</p>
<p>Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)</p>	<p>Permit reviews, education/outreach, inspections, and site visits to explain floodway and floodplain.</p>
<p>How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?</p>	<p>Cost estimate / structural changes.</p>
<p>What are the barriers to running an effective NFIP program in the community, if any?</p>	<p>Owner education and understanding.</p>
<p>Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?</p> <ul style="list-style-type: none"> If so, state the violations. 	<p>No.</p>
<p>When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?</p>	<p>Within the last four years.</p>
<p>What is the local law number or municipal code of your flood damage prevention ordinance?</p>	<p>Local Law # 3-1992</p>
<p>What is the date that your flood damage prevention ordinance was last amended?</p>	<p>1992</p>
<p>Does your floodplain management program meet or exceed minimum requirements?</p> <ul style="list-style-type: none"> If exceeds, in what ways? 	<p>It meets the requirements.</p>
<p>Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?</p>	<p>The Planning Board and Zoning Board consider efforts to reduce flood risk.</p>
<p>Does your community plan to join the CRS program or is your community interested in improving your CRS classification?</p>	<p>No.</p>



9.6.5 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 9.6-11 through Table 9.6-13.

Table 9.6-11. Recent and Expected Future Development

	New Construction Permits Issued			Total
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	15	0	3	46
Permits within SFHA	0	0	0	0
2020				
Total Permits	3	0	1	44
Permits within SFHA	0	0	0	0
2021				
Total Permits	14	0	2	70
Permits within SFHA	1	0	0	1
2022				
Total Permits	5	0	0	45
Permits within SFHA	1	0	0	1
2023				
Total Permits	-	-	-	-
Permits within SFHA	-	-	-	-

Notes SFHA Special Flood Hazard Area (1% flood event)
Permits issued in 2023 were unavailable at the time of this plan update

Table 9.6-12. Recent Major Development and Infrastructure from 2018 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
Rehabilitation of Steel Arch Bridge	Infrastructure	1	Oquaga Road and Still Creek	Yes	Construction in Progress

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

Table 9.6-13. 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
-	-	-	-	-	-

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





9.6.6 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 Town of Colesville's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.6-1 through Figure 9.6-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Colesville has significant exposure. The maps show the location of potential new development, where available.



Figure 9.6-1. Town of Colesville Flood Hazard Area Extent and Location

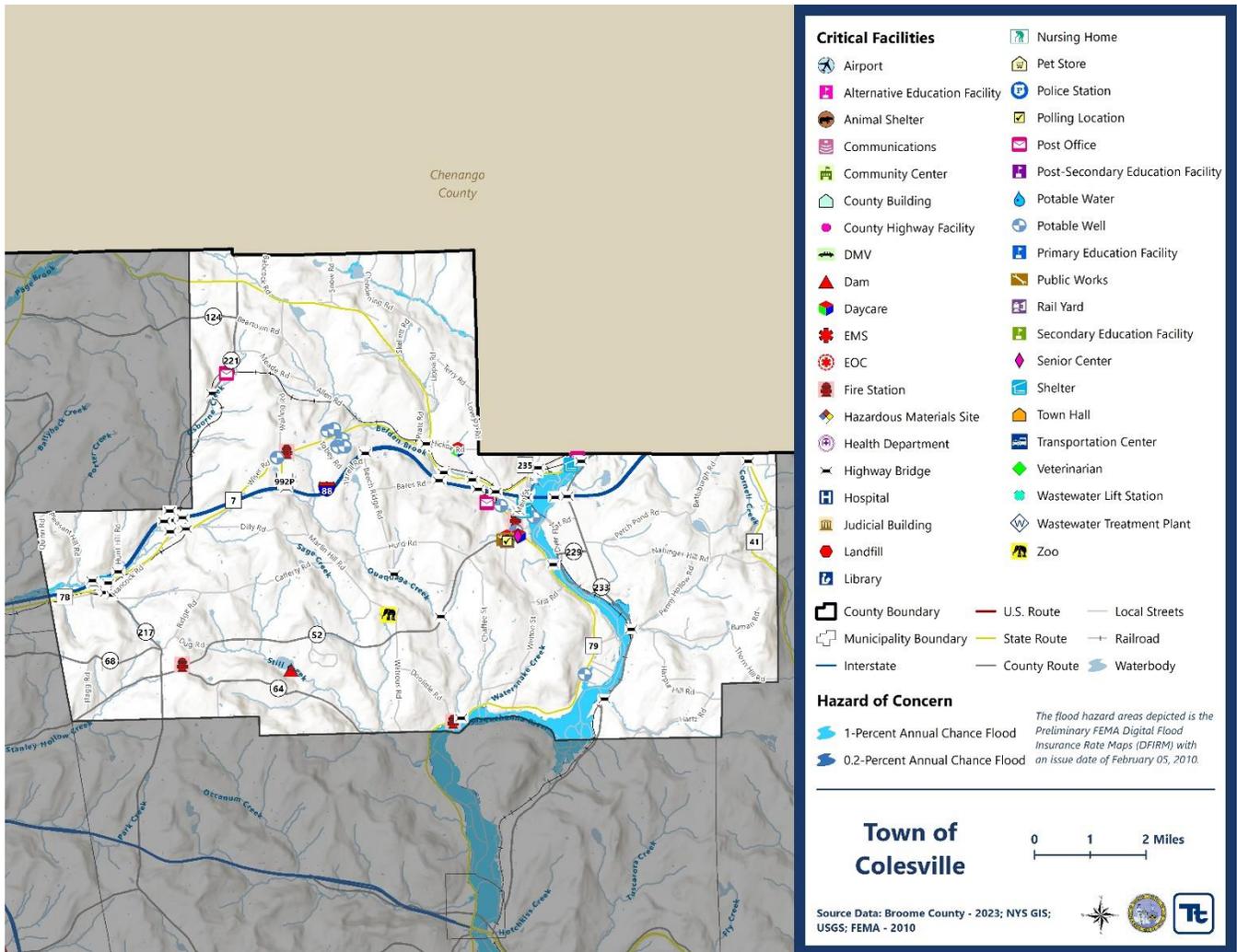
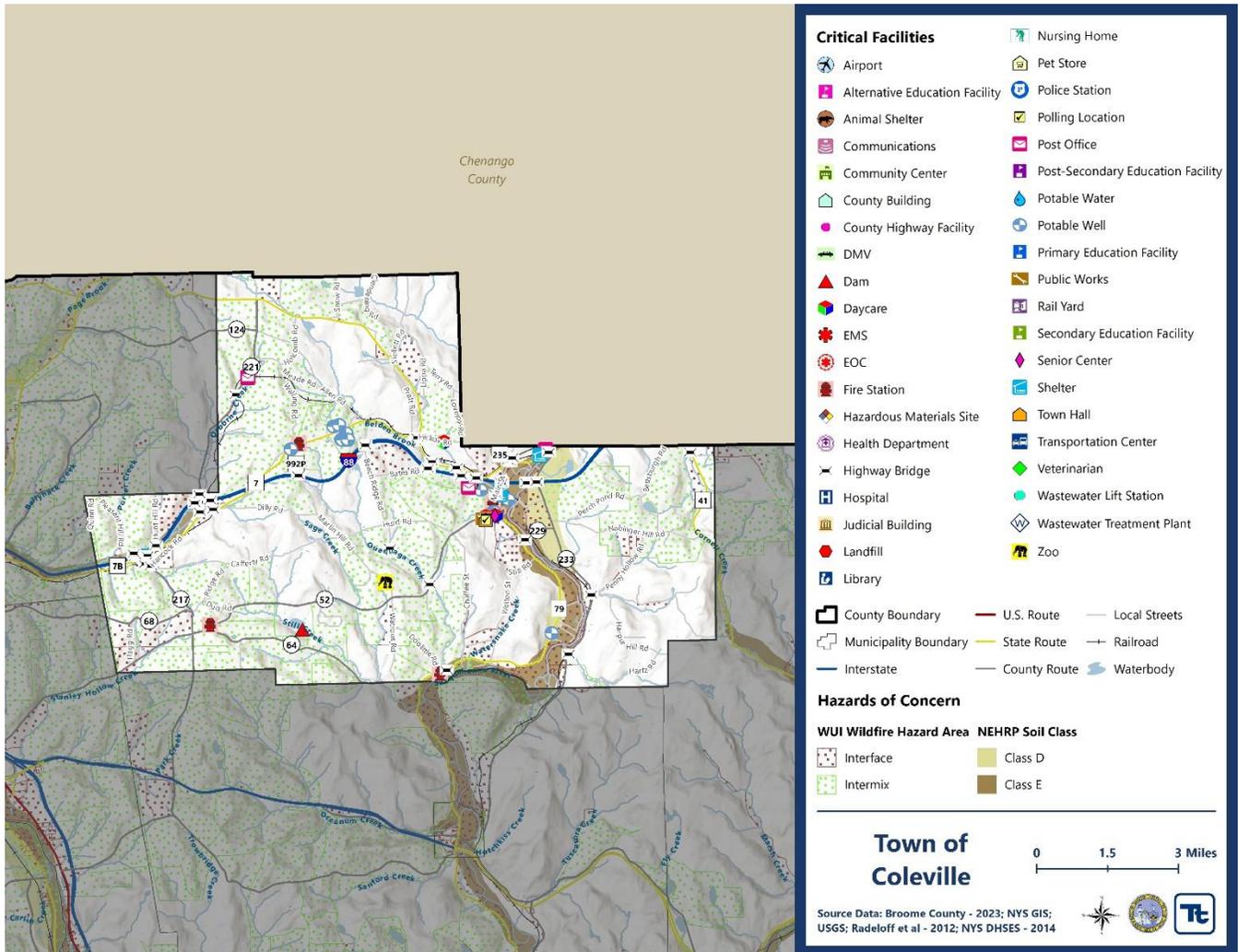




Figure 9.6-2. Town of Colesville Wildfire and NEHRP Soils Hazard Area Extent and Location





Hazard Event History

The history of natural and non-natural hazard events in the Town of Colesville is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.6-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.6-14. Hazard Event History in the Town of Colesville

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	Wind damages occurred across the Town.
January 20, 2020 – May 11, 2023	Disease Outbreak	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	Masking and social distance requirements were in place during the early pandemic period.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Colesville.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Colesville reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community.

Table 9.6-15 shows Colesville’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.





Table 9.6-15. Hazard Ranking

Hazard	Rank
Dam/Levee	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.6-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.6-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Well #1	Potable Well	Yes	Yes	2021-Colesville-03	-
Nineveh Public Library	Library	Yes	Yes	2021-Colesville-03	-
Nineveh Post Office	Post Office	Yes	Yes	2021-Colesville-03	-
Nineveh Presbyterian Church	Shelter	Yes	Yes	2021-Colesville-03	-
Bridge_1003750	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_1003780	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_1094001	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_1094002	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_1095350	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_2225370	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_3349170	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_3349190	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_3367870	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_7030450	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_3370610	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6





Identified Issues

After review of the Town of Colesville's hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Colesville identified the following vulnerabilities within their community:

- The Town does not track permits within hazard areas.
- The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.
- There are critical facilities in the Town that are located in the floodplain, including the Nineveh Public Library, Nineveh Post Office, Nineveh Presbyterian Church, and Well #1. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
- There are repetitive loss properties in the Town. Repetitively flooded properties place undue stress on the property owner and Town and efforts should be made to mitigate them.
- The Town does not have a formalized list of damaged properties or property owners who may be interested in flood mitigation measures, such as elevation or acquisition.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The Town does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.
- The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about storm mitigation, preparation, response, and recovery.
- The area adjacent to the Susquehanna River experiences flooding issues due to a potentially undersized culvert and debris clogging the culvert.
- The Highway Department Facility, which the Town has identified as a critical facility, does not have backup power.
- Porter Hallow Road experiences high water and flash flooding issues impacting the roadway. At least once a year this roadway becomes inundated due to excess surface water runoff which exceeds existing culvert capacity and causes road closures and road failure (washouts) rendering the roadway impassable. Also, homes on Porter Hallow Road are impacted by runoff in that basements are flooded, driveways are impassable and houses are not accessible. The water does recede for at least a day and requires a 4-mile detour.
- Various areas of the Town experience high water and flash flooding issues impacting roadways. Specific areas of concern include Clendening Road and Dilley Road. At least once a year these



roadways become inundated due to excess surface water runoff which exceeds existing culvert capacity and causes road closures and road failure (washouts) rendering roadways impassable.

- FEMA-issued FIRMs are in need of update. The front of many properties in Town, primarily driveways and grass areas, are in the floodplain but the structure is not. The structures are located in undesignated floodplains because of unnamed creeks and tributaries such as Tradewinds Lake.
- The current flood damage prevention ordinance (1992) does not include NYS freeboard requirements.
- The National Weather Service (NWS) provides a certification called Storm Ready to locales that adopt certain weather preparedness principles and planning. The Town does not participate in the Storm Ready program.

*This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.

9.6.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.6-17 indicates progress on the Town'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.

Additional Mitigation Efforts

The Town of Colesville did not identify any additional mitigation efforts completed since the last HMP.



Table 9.6-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Colesville-1	Town Highway Department Generator	All Hazards	Town DPW	Problem: The Highway Department lacks a backup power source. Solution: DPW will install a backup generator	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable
T. Colesville-2	Repetitive Loss Properties in Colesville	Flood	Town Floodplain Administrator working with homeowners	Problem: Repetitive loss properties are at continued risk of flooding. Solution: Inform the homeowner of the different options to mitigate their home (acquisition or elevation). If a homeowner decides to mitigate property, the Town will submit a grant application.	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable
T. Colesville-3	Porter Hallow Road Improvements	Flood	Town DPW	Problem: Porter Hallow Road experiences high water and flash flooding issues impacting the roadway. At least once a year this roadway becomes inundated due to excess surface water runoff which exceeds existing culvert capacity and causes road closures and road failure (washouts) rendering the roadway impassable. Also, homes on Porter Hallow Road are impacted by runoff in that basements are flooded, driveways are impassable and houses are not accessible. The water does recede for at least a day and requires a 4-mile detour. Solution: Phase 1: Do a design study to determine a viable design to mitigate the flood issues. Phase 2: Implement drainage improvements on Porter Hallow Road.	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable
T. Colesville-4	Town of Colesville Critical Floodprone Road Improvements	Flood	Colesville DPW	Problem: Various areas of the Town experience high water and flash flooding issues impacting roadways. Specific areas of concern include Clendening Road and Dilley Road. At least once a year these roadways become inundated due to excess surface water runoff which	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				<p>exceeds existing culvert capacity and causes road closures and road failure (washouts) rendering roadways impassable.</p> <p>Solution: Implement drainage improvements. Various streams and tributaries on Porter Hallow Road, Clendening Road culvert replacement, Dilley Road (NYSDOT and Town replacing culvert pipe).</p>		
T. Colesville-5	Assist in the update of flood plain (FIRM) maps – Jurisdictional Level.	Flood	Town Supervisor	<p>Problem: FIRMs are in need of an update.</p> <p>Solution: Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC, and USGS; and identification of flood-prone areas outside of currently designated areas</p>	<p>1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action</p>	<p>1. Yes 2. Not applicable 3. Not applicable</p>
T. Colesville-6	Implement drainage improvements. Various streams and tributaries on Porter Hallow Road, Clendening Road culvert replacement, Dilley Road (NYSDOT and Town replacing culvert pipe).	Flood	NYSDOT, County and Municipal DPW	<p>Problem: Poor drainage exists in many locations.</p> <p>Solution: Drainage improvements will be made including culvert replacements.</p>	<p>1. No Progress 2. Financial constraints</p>	<p>1. Yes 2. Not applicable 3. Not applicable</p>
T. Colesville-7	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.	Severe Storm	Town Supervisor	<p>Problem: "StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education, and awareness. Participation in the NOAA "StormReady" program shall include providing information on the "StormReady" program, facilitating public outreach and awareness programs, and supporting community storm risk reduction activities as appropriate.</p>	<p>1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action</p>	<p>1. Yes 2. Not applicable 3. Not applicable</p>



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Solution: Specific actions addressed by "StormReady" participation include establishing a 24-hour Warning Point, increasing the number of ways EOC receives NWS warnings, increasing the number of ways to disseminate warnings, monitoring hydrometeorological data, providing annual weather safety talks, training weather spotters, create a formal hazardous weather plan, host annual visits by NWS to communities, etc.		
T. Colesville-8	Protect the Nineveh Public Library to the 500-year flood level.	Flood	Town Floodplain Administrator working with homeowner	Problem: The facility is in a 100-year floodplain. The structure is already elevated but has a basement. Solution: The Town will fill in the basement at the Library, moving the remaining items into an elevated portion of the building.	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable
T. Colesville-9	Protect the Nineveh Post Office to the 500-year flood level.	Flood	Town Floodplain Administrator working with homeowner	Problem: The facility is in a 500-year floodplain. The Town does not have jurisdiction over the facility and cannot mitigate themselves. Solution: The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable
T. Colesville-10	Protect the Nineveh Presbyterian Church from the 500-year flood level.	Flood	Town Floodplain Administrator working with homeowner	Problem: The facility is in a 100-year floodplain. The Town does not have jurisdiction over the facility and cannot mitigate themselves. Solution: The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable
T. Colesville-11	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	Problem: The current flood damage prevention ordinance (1992) does not include NYS freeboard requirements. Solution: The Flood Damage Prevention Ordinance will be updated.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Not applicable 3. Not applicable



Proposed Hazard Mitigation Initiatives for the HMP Update

Colesville participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Colesville 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 the Town’s priorities.

Table 9.6-18 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. Table 9.6-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.6-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee	X	X		X	X	X	X			X
Disease Outbreak		X		X		X	X			X
Drought	X	X		X		X	X			X
Earthquake	X	X		X	X	X	X			X
Extreme Temperature	X	X		X	X	X	X			X
Flood	X	X	X	X	X	X	X		X	X
Invasive Species				X		X	X			
Severe Storm	X	X	X	X	X	X	X		X	X
Severe Winter Storm	X	X		X	X	X	X			X
Wildfire	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 stormwater 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 9.6-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2021-Colesville-01	Permit Tracking	0	1	1	1	1	1	0	0	1	1	0	1	0	1	9	Medium
2021-Colesville-02	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2021-Colesville-03	Critical Facilities in the Floodplain	1	1	1	1	1	0	0	1	1	0	1	1	1	0	10	Medium
2021-Colesville-04	Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
2021-Colesville-05	Flood Mitigation Interest	1	1	1	1	1	1	1	1	1	0	1	1	1	1	13	High
2021-Colesville-06	Disaster Debris Management Plan	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High
2021-Colesville-07	Public Education and Outreach	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Colesville-08	Culvert Improvements	0	1	1	1	1	1	1	0	1	0	1	1	0	0	9	Medium
2021-Colesville-09	Highway Department Facility Back-Up Generator	1	1	1	1	1	0	0	1	1	1	1	1	1	0	11	High
2021-Colesville-10	Porter Hallow Road Improvements	1	1	1	1	1	0	1	0	1	0	1	1	0	1	10	Medium
2021-Colesville-11	Flood Prone Roadways	0	1	1	1	1	0	1	0	1	0	1	1	0	1	9	Medium
2021-Colesville-12	Flood Plain (FIRM) Map Updates	1	1	1	1	1	1	1	1	1	0	0	1	0	0	10	Medium
2021-Colesville-13	Update the Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2021-Colesville-14	Storm Ready Program Participation	1	1	1	1	1	1	0	0	1	1	1	1	0	1	11	High

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



Action 2024-ColesvilleT-01. Permit Tracking

Action Name:	2024-ColesvilleT-01. Permit Tracking		
Description of the Problem:	The Town does not track permits within hazard areas.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Borough will implement a permit tracking process, focused on the Special Flood Hazard Area, but inclusive of other hazards.		
Lead Agency:	Code Enforcement Department		
Supporting Agencies:	Town Council		
Estimated Cost:	Low		
Potential Funding Sources:	Staff Time		
Implementation Timeline:	Within 2 years		
Goals Met:	1, 5, 6		
Benefits:	This action will allow all permits issued within the Town to be tracked by hazard area.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will assist in keeping socially vulnerable populations outside of hazard areas.		
Impact on Critical Facilities/Lifelines:	This action will prevent critical facilities and lifelines from being built within hazard areas, which may otherwise impact emergency response times.		
Impact of Capabilities:	This action will create a new capability for the Town and strengthen its enforcement capabilities.		
Impact on Future Development:	This action may lead to permits being restricted within various identified hazard areas in the Town and municipal codes to be updated.		
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the Town's ability to track structures located in hazard areas which may have conditions exacerbated by the impacts of climate change, such as floods and wildfires.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No action	Current problem remains
	Track-only flood development permits	Will align with NFIP requirements, but will not consider other hazard areas in the Borough
	Contract with a neighboring municipality to track permits	May not be feasible



Action 2024-ColesvilleT-02. Socially Vulnerable Populations Outreach

Action Name:	2024-ColesvilleT-02. Socially Vulnerable Populations Outreach	
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.	
Lead Agency:	Town Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	
Impact on Critical Facilities/Lifelines:	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.	





Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current methods remain the only ones used
	Rely on state or federal resources		Resources may be generalized and not specific to the risks in the Town
	Use only a few methods for distribution		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance



Action 2024-ColesvilleT-03. Critical Facilities in the Floodplain

Action Name:	2024-ColesvilleT-03. Critical Facilities in the Floodplain	
Description of the Problem:	There are critical facilities in the Town that are located in the floodplain, including the Nineveh Public Library, Nineveh Post Office, Nineveh Presbyterian Church, and Well #1. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>Coordinate with the facility managers at the Nineveh Public Library, Nineveh Post Office, Nineveh Presbyterian Church, and Well #1 to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.</p> <p>Phase 1: Identify the most cost-effective mitigation option.</p> <p>Phase 2: Work with the facility manager to implement selected action based on available funding and local match ability.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Town Council, Facility Managers	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Town Budget, Private Owners	
Implementation Timeline:	5 years	
Goals Met:	1, 3, 5	
Benefits:	This action will remove or reduce critical facility and community lifeline vulnerability to flood hazards and remove or reduce safety risks for first responders.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.	
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	





Impact of Capabilities:	This action will enhance the Town’s current NFIP capabilities.	
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	
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. As sea level rises due to climate change, the area of the flood hazard may expand.	
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
Alternatives	Action	Evaluation
	No action	Current problem continues
	Floodproof existing structures	May not necessarily reduce the risk
	Construct floodwalls to stop flood issues	Will most likely interrupt natural floodplain function



Action 2024-ColesvilleT-04. Repetitive Loss Properties

Action Name:	2024-ColesvilleT-04. Repetitive Loss Properties	
Description of the Problem:	There are repetitive loss properties in the Town. Repetitively flooded properties place undue stress on the property owner and Town and efforts should be made to mitigate them.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will promote and support non-structural flood hazard mitigation alternatives for at-risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be funding, benefits versus cost, and willing participation of property owners.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Broome County	
Estimated Cost:	Medium	
Potential Funding Sources:	FEMA FMA, FMA SWIFT, Town Budget, County Budget, Property Owners	
Implementation Timeline:	3 years	
Goals Met:	1, 5	
Benefits:	This action would foster comprehensive floodplain management by removing at-risk properties from the flood hazard area or elevating properties to reduce the flood risk.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.	
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	This action will enhance the Town’s current NFIP capabilities.	
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.	





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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem continues
	Construct flood walls/barriers around vulnerable areas		Costly and can divert floodwaters to other areas
	Deployable flood barriers for vulnerable areas		Requires a great deal of work to implement prior to each event



Action 2024-ColesvilleT-05. Flood Mitigation Interest

Action Name:	2024-ColesvilleT-05. Flood Mitigation Interest	
Description of the Problem:	The Town does not have a formalized list of damaged properties or property owners who may be interested in flood mitigation measures, such as elevation or acquisition.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Floodplain Administration will develop a list for inventorying systems, or properties damaged by flood events and property owners who are interested in flood mitigation measures, such as elevation or acquisition.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Planning Board, Zoning Board, Village Administration, Town Council	
Estimated Cost:	Staff time, Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	Within 2 years	
Goals Met:	1, 3, 5, 6	
Benefits:	Keeping a list of damaged properties and property owners interested in flood mitigation efforts may lead to the elimination of flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Collecting data regarding homeowners who reside within flood-prone areas provides an opportunity to introduce location-specific opportunities for assistance. Removing homes from the floodplain immediately removes the risk to life and property.	
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	This action will create a new Town capability while enhancing its current NFIP capabilities.	
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.	





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. Areas experiencing flooding conditions may increase. 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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No action	Current problem remains	
	Only share opportunities when notified of grant funding	May not be enough time to garner interest or write application	
	Wait for information from the State on flood-damaged properties	Maybe a delay in notice	



Action 2024-ColesvilleT-06. Disaster Debris Management Plan

Action Name:	2024-ColesvilleT-06. Disaster Debris Management Plan	
Description of the Problem:	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The Town does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for the execution of the plan. The plan will align with permitted temporary collection areas.	
Lead Agency:	Town Highway Department	
Supporting Agencies:	Town Council, Town Public Safety Entities, Broome County	
Estimated Cost:	Staff time	
Potential Funding Sources:	Town budget	
Implementation Timeline:	Within 5 years	
Goals Met:	3, 4, 5, 6	
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Not applicable	
Impact on Critical Facilities/Lifelines:	The action will result in increased post-disaster capabilities.	
Impact of Capabilities:	N/A	
Impact on Future Development:	N/A	



Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on federal cleanup		These services may or may not be available
	Rely on state cleanup		These services may or may not be available



Action 2024-ColesvilleT-07. Public Education and Outreach

Action Name:	2024-ColesvilleT-07. Public Education and Outreach	
Description of the Problem:	The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about storm mitigation, preparation, response, and recovery.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	Develop and enhance the public awareness program on hazards, prevention, and mitigation. Continue to work with Broome County on their program that provides information to the municipalities.	
Lead Agency:	Town Council	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	1 year	
Goals Met:	1, 2, 3	
Benefits:	This action will improve the current public education and outreach program in the Town by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the Town.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" 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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the various hazards that may impact them in the Town.	
Impact on Critical Facilities/Lifelines:	Businesses, which may be considered critical facilities or lifelines, would be more informed on how to prepare for emergency events and mitigate the risks of potential hazards. With these businesses becoming more resilient, this action would contribute to their continuity of operations.	
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.	
Impact on Future Development:	N/A	
Climate Change Considerations:	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.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Village.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.



Action 2024-ColesvilleT-08. Culvert Improvements

Action Name:	2024-ColesvilleT-08. Culvert Improvements	
Description of the Problem:	The area adjacent to the Susquehanna River experiences flooding issues due to a potentially undersized culvert and debris clogging the culvert.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town Engineer will identify the appropriately sized culverts at each location in the Town. The Highway Department and Engineer will be responsible for the replacement/upgrades at each identified culvert.	
Lead Agency:	Engineering	
Supporting Agencies:	Highway Department	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget	
Implementation Timeline:	5 years	
Goals Met:	1, 5	
Benefits:	The Town will have upgraded all the culverts to be able to manage stormwater, mitigating the flood hazard.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding. Furthermore, this action will assist in keeping roadways clear of flood waters for the populations that may need to attend medical appointments or require medical attention from first responders.	
Impact on Critical Facilities/Lifelines:	This action would assist in the reduction of roadway flooding, permitting first responders to traverse the roadways safely.	
Impact of Capabilities:	This action will strengthen the Town’s stormwater management capabilities.	
Impact on Future Development:	Future development adjacent to the Susquehanna River will have enhanced protections from the flood hazard and severe storm impacts.	
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 that contribute to flooding. This action will increase the carrying capacity of the culverts to account for increased stormwater volumes.	





Priority: <i>Check one</i> Alternatives	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
	Action		Evaluation
	No action.		The current problem remains.
	Construct flood walls/barriers around vulnerable areas.		Costly and can divert floodwaters to other areas.
	Implement green infrastructure.		There may be insufficient space for green infrastructure to be effective.



Action 2024-ColesvilleT-09. Highway Department Facility Back-Up Generator

Action Name:	2024-ColesvilleT-10. Highway Department Facility Back-Up Generator	
Description of the Problem:	The Highway Department Facility, which the Town has identified as a critical facility, does not have backup power.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Highway Department and Engineering will oversee the installation of a fixed-mounted diesel-powered generator and necessary electrical components to supply backup power to the Highway Department Facility. The Highway Department will be responsible for the maintenance and testing of the generator following installation.	
Lead Agency:	Highway Department	
Supporting Agencies:	Town Council, Engineering	
Estimated Cost:	Approximately \$60,000	
Potential Funding Sources:	HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Annual Budget	
Implementation Timeline:	Within 2 years	
Goals Met:	1, 5	
Benefits:	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures t continued operation of a critical facility and its essential functions during a power outage.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem remains
	Microgrid		Costly and difficult to implement.
	Solar panels and battery backup		Solar power is unlikely to be able to provide battery power for extended power failure events.



Action 2024-ColesvilleT-10. Porter Hallow Road Improvements

Action Name:	2024-ColesvilleT-10. Porter Hallow Road Improvements	
Description of the Problem:	Porter Hallow Road experiences high water and flash flooding issues impacting the roadway. At least once a year this roadway becomes inundated due to excess surface water runoff which exceeds existing culvert capacity and causes road closures and road failure (washouts) rendering the roadway impassable. Also, homes on Porter Hallow Road are impacted by runoff in that basements are flooded, driveways are impassable and houses are not accessible. The water does recede for at least a day and requires a 4-mile detour.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>Phase 1: The Town and partnering agencies will perform a flood study to identify potential mitigation actions to reduce the occurrence of flooding and flood risk when floods do occur.</p> <p>Phase 2: Implement cost-effective improvements on Porter Hallow Road.</p>	
Lead Agency:	Town Engineer	
Supporting Agencies:	Highway Department, Town Council	
Estimated Cost:	High	
Potential Funding Sources:	HMGP, BRIC, FMA, Town Budget	
Implementation Timeline:	5 years	
Goals Met:	1, 3, 5	
Benefits:	The action will reduce flood risk in hazard-prone areas; permit vulnerable communities will be identified ahead of a flood event, which will allow first responders to plan and stage resources in those areas; and allow for future mitigation projects to be identified which will further increase overall community resiliency to flooding and other hazard events.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Areas vulnerable to flooding will be made aware to Town leadership and first responders which can emphasize controlled future development. If cost-effective mitigation actions are identified, they may be implemented in flood-prone areas that could reduce the overall risk of loss of life and property.	





Impact on Critical Facilities/Lifelines:	Transportation routes will be more likely to remain open if flooding is mitigated along them. Additionally, hydration systems may remain potable for community usage if projects are identified to protect the existing infrastructure from flooding.	
Impact of Capabilities:	This study will identify opportunities for mitigation funding to be spent in the areas in which it is most needed to increase resiliency and decrease damage from flood events.	
Impact on Future Development:	Flood insurance costs may decrease.	
Climate Change Considerations:	Consideration should be taken to ensure any projects conducted have accounted for increased extreme rainfall events.	
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem continues
	Relocate all flood-prone road systems.	Not feasible
	Raise all flood-prone roads.	Cost prohibitive



Action 2024-ColesvilleT-11. Flood Prone Roadways

Action Name:	2024-ColesvilleT-11. Flood Prone Roadways		
Description of the Problem:	Various areas of the Town experience high water and flash flooding issues impacting roadways. Specific areas of concern include Porter Hollow Road, Clendening Road, and Dilley Road. At least once a year these roadways become inundated due to excess surface water runoff which exceeds existing culvert capacity and causes road closures and road failure (washouts) rendering roadways impassable.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will develop specific mitigation solutions for flood-prone road systems (roads, bridges, intersections, drainage, etc.) under the leadership of County Public Works.		
Lead Agency:	Town Highway Department		
Supporting Agencies:	Engineering, County Public Works		
Estimated Cost:	Medium		
Potential Funding Sources:	FEMA BRIC, HMGP, Town Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 3		
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.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.		
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 of Capabilities:	N/A		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
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.		
Priority:	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low





<i>Check one</i>			
Alternatives	Action	Evaluation	
	No action.	The current problem continues.	
	Relocate all flood-prone road systems.	Not feasible.	
	Raise all flood-prone roads.	Cost prohibitive.	



Action 2024-ColesvilleT-12. Flood Plain (FIRM) Map Updates

Action Name:	2024-ColesvilleT-12. Flood Plain (FIRM) Map Updates	
Description of the Problem:	FEMA-issued FIRMs are in need of an update. The front of many properties in Town, primarily driveways and grass areas, are in the floodplain but the structure is not. The structures are located in undesignated floodplains because of unnamed creeks and tributaries such as Tradewinds Lake.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Work with Broome County to submit a request to FEMA to update the FIRMs that contain the Town. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC, and USGS; and identification of flood-prone areas outside of currently designated areas.	
Lead Agency:	Town Council	
Supporting Agencies:	Broome County, NYSDEC, NYSDHSES, USGS, FEMA	
Estimated Cost:	Low	
Potential Funding Sources:	Staff Time, HMGP	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 6	
Benefits:	Updating FIRMs will provide a more complete picture of the floodplain and the overall flood hazard in the Town. This will inform other sectors of the community, including land use, development, permitting, and codes and standards.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" 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)
Impact on Socially Vulnerable Populations:	An analysis of the floodplain will inform future community development and land use and prevent vulnerable populations from residing in areas of heightened flood risk.	
Impact on Critical Facilities/Lifelines:	The creation of updated floodplain maps will inform efforts to increase the resilience of critical infrastructure that is present in those areas, including transportation routes, water treatment plants, and other utility services. This will also aid in preventing future development of infrastructure in these areas.	
Impact of Capabilities:	An understanding of the floodplain will allow for the development of processes, plans, training, and staff placement to address flooding issues in the areas of greatest concern before they occur.	





Impact on Future Development:	Updated FIRMs will decide which populations and structures will require flood insurance to be built in areas of flood hazard.		
Climate Change Considerations:	The maps that are developed as a result of this action may not remain current or valid for the length of time that they may have in the past due to changes in floodplains and increases in extreme rainfall events.		
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Maps will remain outdated.
	Request update only for areas with unmarked bodies of water.		The remainder of Town may remain inaccurate.
	Request update for areas only along currently delineated SFHA.		The remainder of Town may remain inaccurate.



Action 2024-ColesvilleT-13. Update the Flood Damage Prevention Ordinance

Action Name:	2024-ColesvilleT-13. Update the Flood Damage Prevention Ordinance		
Description of the Problem:	The current flood damage prevention ordinance (1992) does not include NYS freeboard requirements.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town’s Flood Damage Prevention Ordinance will be updated to meet or exceed the New York State freeboard requirements.		
Lead Agency:	Floodplain Administrator		
Supporting Agencies:	Construction Official, Town Council, NFIP State Coordinator, FEMA Regional Office		
Estimated Cost:	Staff time		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 6		
Benefits:	The updated ordinance will improve floodplain management, meet NYS and NFIP requirements, and increase the resilience of new and substantially improved structures in the floodplain.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	The action will result in better regulation of construction standards within the Special Flood Hazard Area where significant risk to socially vulnerable populations exists.		
Impact on Critical Facilities/Lifelines:	Critical facilities and lifelines located in the Special Flood Hazard Area will be required to meet the same requirements as general building construction that are set forth in the ordinance.		
Impact of Capabilities:	This action will improve floodplain management capabilities through better outlining of responsibilities and administrative procedures.		
Impact on Future Development:	The action will result in stronger regulation of construction standards for future development in the Special Flood Hazard Area.		
Climate Change Considerations:	The updated ordinance includes the State’s standards that are in place to address heightened flood risk due to climate change such as those for floodway rise and mandatory freeboard.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action.	The current problem exists.
	Rewrite the full, existing flood damage prevention ordinance.	Time intensive.
	Leave NFIP.	Residents lose flood insurance coverage.



Action 2024-ColesvilleT-14. Storm Ready Program Participation

Action Name:	2024-ColesvilleT-14. Storm Ready Program Participation	
Description of the Problem:	The National Weather Service (NWS) provides a certification called Storm Ready to locales that adopt certain weather preparedness principles and planning. The Town does not participate in the Storm Ready program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will coordinate with the local NWS office to complete all necessary requirements to become a Storm Ready community.	
Lead Agency:	Town Council	
Supporting Agencies:	Broome County OEM, NWS	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	3 years	
Goals Met:	1, 2, 3	
Benefits:	Storm Ready is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. Storm Ready provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	To become a participant in the Storm Ready program, a community must have more than one way to receive severe weather warnings and forecasts and to alert the public. Increasing methods of communication with socially vulnerable populations can assist in the safety and security of residents.	
Impact on Critical Facilities/Lifelines:	Being a part of the Storm Ready program would result in improved critical facility readiness.	
Impact of Capabilities:	Participating in the Storm Ready program will increase the capabilities of the Town. To become a participant in the program, a community must establish a 24-hour warning point and emergency operations center, have more than one way to receive severe weather warnings and	





	forecasts and to alert the public, create a system that monitors weather conditions locally, promote the importance of public readiness through community seminars, and develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.	
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action will increase emergency response capabilities to increase storm risks.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
Alternatives	Action	Evaluation
	No Action.	The Town does not participate in the Storm Ready Program.
	Increase warning system capabilities without Storm Ready guidance.	No CRS points would be available. Less public awareness and support from NWS.
	Participate in the program, but do not utilize resources.	The Town would miss opportunities to strengthen communication and safety skills.



SECTION 9.

9.7 TOWN OF CONKLIN

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

9.7.1 Hazard Mitigation Planning Team

The Town of Conklin identified primary and alternate HMP points of contact and developed this plan over several months, with input from many Town departments. The Code Enforcement Officer represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.7-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.7-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Nick Pappas, Code Enforcement Address: 1271 Conklin Rd., Conklin, NY 13748 Phone Number: (607) 775-3456 Email: code@townofconklin.org	Name/Title: John Mastronardi, Engineer Address: 1271 Conklin Rd., Conklin, NY 13748 Phone Number: (607) 724-2400 ext. 223 Email: jmastronardi@griffithsengineering.com
NFIP Floodplain Administrator	
Name/Title: Nick Pappas, Code Enforcement Address: 1271 Conklin Rd., Conklin, NY 13748 Phone Number: (607) 775-3456 Email: code@townofconklin.org	
Additional Contributors	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	



Primary Point of Contact	Alternate Point of Contact
Name/Title: Method of Participation:	

9.7.2 Municipal Profile

The Town of Conklin is in the southern part of Broome County, NY. The eastern town line is marked by the Susquehanna River. The Town includes the hamlets of Corbettsville, Conklin, Conklin Forks, Conklin Station, and Conklin Center. The Town of Conklin has a total area of 24.4 square miles. The Town of Conklin is in the southern part of Broome County, NY. The town is bounded to the north and east by the Town of Kirkwood, on the south by the Pennsylvania State Line, and the west by the Town of Binghamton. The eastern town line is marked by the Susquehanna River. Snake Creek, a tributary of the Susquehanna, was the site of early town settlement. New York State Route 7 splits off New York State Route 7A in the southeast corner of the town by Corbettsville (Tetra Tech 2019).

Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Conklin is governed by a Supervisor and four council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Conklin was 5,008, an 8 percent decrease from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 5.7 percent of the population is 5 years of age or younger, 22.6 percent is 65 years of age or older, 3.6 percent is non-English speaking, 11.7 percent is below the poverty threshold, and 12.7 percent is considered disabled.

9.7.3 Jurisdictional Capability Assessment and Integration

The Town of Conklin 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Conklin to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.7-2 summarizes the planning and regulatory tools that are available to the Town of Conklin. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.7-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Town Code, Chapter 73, Fire Prevention and Building Construction. 12/26/2006	State and Local	Code Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This local law provides for the administration and enforcement of the New York Uniform Fire Prevention and Building Code and the State Energy Conservation Construction Code in the Town. It includes the creation of a Code Officer; institutes building permit requirements; outlines instruction inspection provisions; and mandates Certificates of Compliance.				
Zoning/Land Use Code	Yes	Town Code, Chapter 140, Zoning. 11/9/1965	Local	Code Officer/Zoning Board of Appeals
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> To encourage the most appropriate use of land, to protect and conserve the value of the property, and to promote the health, safety, morals, and general welfare of the community, this law regulates the location, use, and occupancy of buildings and the use of land for trade, industry, residence and other uses, regulates and limits the height and bulk of buildings and other structures, regulates and determines the area of yards and other open spaces, regulates the density of population and, for said purpose, divides the Town into districts, to provide for its enforcement and administration and to prescribe penalties for the violation of its provisions.				
Subdivision Code	Yes	Town Code, Chapter 115, Subdivision of Land. 11/9/1999	Local	Code Officer/Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the policy of the Planning Board to consider land subdivisions as part of a plan for the orderly, efficient, and economical development of the town. Land to be subdivided shall be of such character that it can be used for building purposes without danger to health or peril from fire, flood, drainage, or other menace to neighboring properties or the public health, safety, and welfare. A subdivision shall not be approved, and facilities shall not be accepted by the town unless the subdivider fully completes all necessary facilities so that the town's obligation is limited to the maintenance of a completed facility and does not include any portion of its construction. The purpose of this policy is to provide for the future growth and development of the town and to afford adequate facilities for the housing, transportation, distribution, comfort, convenience, safety, health, and welfare of its population.				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>A stormwater pollution prevention plan (SWPPP) consistent with the requirements of the Town of Conklin Stormwater Management and Erosion and Sediment Control Local Law (Local Law No. 4 of 2007)3 shall be required for preliminary plat approval.</p> <p>A preliminary plat shall not be considered complete until a negative declaration has been filed or until a notice of completion of the draft environmental impact statement has been filed in accordance with the provisions of the State Environmental Quality Review Act.</p>				
Site Plan Code	Yes	Town Code, Chapter 140, Zoning; Article XXVI. 5/9/1989.	Local and County	Planning Board, Code Officer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>All new land use activities within the Town, including each additional permitted use, shall require site plan review and approval before being undertaken by the Town Planning Board. Site plans must include a statement and rough sketch showing the locations and dimensions of principal and accessory structures, parking areas, access signs (with descriptions), existing and proposed vegetation, and other planned features; anticipated changes in the existing topography and natural features to comply with flood hazard and flood insurance regulations; and such other information as may be recommended by the Code Enforcement Officer.</p>				
Stormwater Management Code	Yes	Town Code, Chapter 111, Stormwater Management and Erosion and Sediment Control. 6/26/2007.	Local	Code Enforcement Office/Engineer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of the law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within the jurisdiction. It also:</p> <ul style="list-style-type: none"> A. Meets the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02; B. Requires land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities, GP-02-01; C. Minimizes increases in stormwater runoff from land development activities to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels; D. Minimizes increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; E. Minimizes the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and F. Reduces stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensures that these management practices are properly maintained and eliminate threats to public safety. 				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>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</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	Yes	Town Code, Chapter 79, Freshwater Wetlands. 8/31/1976.	Local, State	Planning Board, Zoning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Pursuant to § 24-0501 of the New York State Freshwater Wetlands Act (Article 24 of the New York Environmental Conservation Law), the Town of Conklin fully undertakes and exercises its regulatory authority with regard to activities subject to regulation under the Act in freshwater wetlands, as shown on the Freshwater Wetlands Map as such map may from time to time be amended, filed by the Department of Environmental Conservation pursuant to the Act, and in all areas adjacent to any such freshwater wetland up to 100 feet from the boundary of such wetland.				
Flood Damage Prevention Ordinance	Yes	Town Code, Chapter 76, Flood Damage Prevention. 4/14/1987.	Federal, State, County, and Local	Code Enforcement Office/Engineer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:				
<ul style="list-style-type: none"> A. Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities. B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. D. Control filling, grading, dredging, and other development which may increase erosion or flood damages. E. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. F. Qualify for and maintain participation in the National Flood Insurance Program. 				
The ordinance allows the Town to require certificates of elevation, with deficiencies resulting in a stop work order; require anchoring of all new construction and substantial improvements; requires all new constructions and substantial improvements to be elevated above the base flood elevation or be flood-proofed in the case of non-residential buildings; and lays out special requirements for construction in the Special Flood Hazard Area.				
Wellhead Protection	Yes	Town Code, Chapter 135, Wellhead Protection. 6/16/1998.	Local	Planning Board, Zoning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The purpose and intent of this chapter are to protect and promote the safety of the groundwater supply for the residents of the Town of Conklin, New York. No person, including state agencies or political subdivisions having jurisdiction, shall perform any act or grant any permit or approval which may result in the contravention of the standards for raw water quality as contained in Part 170 of Title 10 (Health) of the New York Codes, Rules, and Regulations (10 NYCRR 170). Town of Conklin Wellhead Protection Permits shall be applied for and issued.				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Other: Storm Sewers	Yes	Town Code, Chapter 110, Storm Sewers. 6/26/2007.	Federal, State, Local	Code Enforcement Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this chapter is to provide for the health, safety, and general welfare of the citizens of the Town of Conklin through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This article establishes methods for controlling the introduction of pollutants into the MS4 to comply with the requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems. The objectives of this article are:</p> <ul style="list-style-type: none"> A. To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit No. GP-02-02, as amended or revised; B. To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process, or discharge non-stormwater wastes; C. To prohibit illicit connections, activities, and discharges to the MS4; D. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this article; and E. To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment, and other pollutants into the MS4. 				
Planning Documents				
General/Comprehensive Plan	Yes	Town of Conklin Comprehensive Plan, June 2004.	Local	Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Town's Comprehensive Plan includes a Natural Resources Inventory which is meant to provide a source of information about the resources in the Town. With this information, areas that are most suitable for various types of land use can be identified and developed with overall conditions in mind. The NRI then can be used as a basis for the evaluation of different sites. The Inventory is concerned with fostering development in Conklin while preserving its natural features and resources for the enjoyment of future generations. It is also concerned with preventing development in sensitive areas which could have adverse effects on the surroundings. The features discussed include wetlands, floodplains, soils, aquifers, slopes, and mineral resources. The Plan also outlines existing land uses and includes land use recommendations.</p>				
Capital Improvement Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Disaster Debris Management Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Floodplain Management or Watershed Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Stormwater Management Plan	Yes	Stormwater Management Plan, 2021	Local	Code Enforcement Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>This Stormwater Management Program (SWMP) Plan has been developed to comply with Part IV.A. of the New York State Department of Environmental Conservation General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems – Permit No. GP-0-08-002 (updated in April 2010 to Permit No. GP-0-10-002 and subsequently updated in April 2017 to Permit No. GP-0-15-003) for a Traditional Non-Land Use Control. The purpose of this plan is to maintain or improve water</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
quality. The Town of Conklin MS4 is a member of the Broome-Tioga Stormwater Coalition (BTSC). The BTSC exists by way of an inter-municipal agreement enacted through municipal resolution by each of the fifteen (15) participating members.				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	Yes	Broome County Agricultural Economic Development Plan, January 2019	County	Broome County Department of Planning & Economic Development
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The New York State Department of Agriculture and Markets requires recipients of Agricultural Protection Planning Program funds to identify lands that warrant protection measures as a result of their contribution to regional agricultural viability. In Broome County, this approach is two-fold:				
<ul style="list-style-type: none"> • First, this analysis examines factors of environmental quality and countywide resiliency. Resiliency refers to the land's ability to absorb and recover from shocks and stresses on agricultural production. For Broome County, flooding often causes these disruptions. • Second, this analysis examines vulnerability to development, defined here as the land's exposure, susceptibility, or capacity for the conversion of agricultural land to other more intensive uses, such as residential or commercial development. 				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYSDHSES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This portion of the CEMP addresses the State’s overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA’s five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operations Plan, 2/14/2008	County	Broome County Emergency Management
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	Local and state	
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following:				
<ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; 				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<ul style="list-style-type: none"> - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and provide an overview of the stakeholder planning group (SPG).				
Other: Hazardous Materials Incident Response Plan	Yes	Broome County Emergency Medical Services System Hazardous Materials Incident Response Plan (2008)	County	County OEM
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of the plan is the coordination of on-scene emergency medical care, transportation, and hospital treatment for victims of a hazardous materials emergency in Broome County.				

Development and Permitting Capability

Table 9.7-3 summarizes the capabilities of the Town of Conklin to oversee and track development.

Table 9.7-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> • If you issue development permits, what department is responsible? • If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Enforcement Office
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain development
Do you have a buildable land inventory? <ul style="list-style-type: none"> • If you have a buildable land inventory, please describe 	Yes	Yes, mapped current land uses and zoning maps are included within the Comprehensive Plan.
Describe the level of build-out in your jurisdiction.	N/A	There are 2,884 parcels and approximately 14,757 acres of land in the Town of Conklin. Development is concentrated along the Susquehanna River, Conklin Road (NYS Route 7), and the railroad in the eastern portion of the Town. This area has the highest intensity of land uses with Conklin Road having the highest concentration of development. The Town of Conklin has two dominant land uses: single-family residential and vacant (undeveloped) land, each occupying nearly 40 percent of the Town. Other land uses occupy a small portion of the total land area.





Administrative and Technical Capability

Table 9.7-4 summarizes potential staff and personnel resources available to the Town of Conklin and their current responsibilities that contribute to hazard mitigation.

Table 9.7-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board of the Town of Conklin consists of five members. Meets once a month. Issues recommendations on permitting and construction.
Zoning Board of Appeals	Yes	The Zoning Board consists of five members. Their duties include the interpretation of the zoning code and the issuance of any variances or special use permits.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Town of Conklin Highway Department is responsible for the upkeep and maintenance of Town roads including, but not limited to, snow removal, ice control, tree and brush removal, signage and paving, routine road maintenance, seasonal work, emergency, and special projects.
Construction/Building/Code Enforcement Department	Yes	The Code Enforcement Office is responsible for maintaining code guidelines for new construction and remodeling existing structures. The building must comply with the Town of Conklin Building Guidelines below and will be confirmed by an inspector.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Town of Conklin Highway Department is responsible for the upkeep and maintenance of Town roads including, but not limited to, snow removal, ice control, tree and brush removal, signage and paving, routine road maintenance, seasonal work, emergency, and special projects.
Mutual aid agreements	Yes	Partnerships with neighboring municipalities for emergency responses.
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering Services through consultant upon retainer Contract: Griffiths Engineering, LLC



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering Services through consultant upon retainer Contract: Griffiths Engineering, LLC
Planners or engineers with an understanding of natural hazards	Yes	Engineering Services through consultant upon retainer Contract: Griffiths Engineering, LLC
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Code Enforcement Office/Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Code Enforcement Officer/Supervisor
Grant writer(s)	Yes	Contract: Griffiths Engineering, LLC
Resilience Officer	No	-
Other: NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement Officer Nick Pappas

Fiscal Capability

Table 9.7-5 summarizes financial resources available to the Town of Conklin.

Table 9.7-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital improvement project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	

Education and Outreach Capability

Table 9.7-6 summarizes the education and outreach resources available to the Town of Conklin.



Table 9.7-6. 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	Contracted
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	NY ALERT is available for residents to utilize.
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Does the jurisdiction have any public outreach mechanisms/programs in place to inform citizens about natural hazards, risks, and ways to protect themselves during such events? <ul style="list-style-type: none"> If yes, please describe. 	No	-

Community Classifications

Table 9.7-7 summarizes classifications for community programs available to the Town of Conklin.

Table 9.7-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

- N/A Not applicable
- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.7-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.7-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.7.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.7-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.7-9 summarizes the NFIP statistics for the Town of Conklin.

Table 9.7-9. Town of Conklin NFIP Summary of Policy and Claim Statistics

# Policies	198
# Claims (Losses)	764
Total Loss Payments	\$35,419,259
# Repetitive Loss Properties (NFIP definition)	152

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.

Source: FEMA Region II October 2023

Flood Vulnerability Summary

Table 9.7-10 provides a summary of the NFIP program in the Town of Conklin.

Table 9.7-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Flood-prone areas are currently mapped on FEMA FIRM's and Broome County GIS.
Do you maintain a list of properties that have been damaged by flooding?	No





NFIP Topic	Comments
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	None.
How do you make Substantial Damage determinations?	Substantial Damage determinations are made based on comparing the structures' Fair Market Value vs. estimated damages received during a flood event. Estimated damages come in the form of an engineer/code officer's opinion of probable cost of repair or from contractors estimate.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	Unknown
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	No. FEMA Preliminary DFirm Maps more accurately addresses flood risk within the Town however these maps were never formally approved and/or adopted.
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement Office
Are any certified floodplain managers on staff in your jurisdiction?	Yes
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes – FEMA, State, and Regional online resources
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Review/approval of Floodplain Development Permits
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	Based on the contractor's estimate.
What are the barriers to running an effective NFIP program in the community, if any?	Staffing and funding.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	None that they are aware of.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	March 13, 2009
What is the local law number or municipal code of your flood damage prevention ordinance?	LL No. 1-1987
What is the date that your flood damage prevention ordinance was last amended?	June 27, 2022



NFIP Topic	Comments
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	The Town’s floodplain management program meets minimum requirements.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	During Site Plan Review the Planning Board considers a project's potential impacts within the floodplain.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not at this time.

9.7.5 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 9.7-11 through Table 9.7-13.

Table 9.7-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	4	0	0	4
Permits within SFHA	0	0	0	0
2020				
Total Permits	4	0	0	4
Permits within SFHA	0	0	0	0
2021				
Total Permits	2	0	1	3
Permits within SFHA	0	0	0	0
2022				
Total Permits	10	0	0	10
Permits within SFHA	0	0	0	0
2023				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.7-12. Recent Major Development and Infrastructure from 2018 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
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Bridge-wearing surface & membrane replacement maintenance project	Infrastructure	1	Pierce Creek Road over Little Snake Creek	Yes	Completed.
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* Only location-specific hazard zones or vulnerabilities are identified.

Table 9.7-13. 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
There are no known or anticipated major development or infrastructure projects in the Town within the next five (5) years.					

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

9.7.6 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 Town of Conklin’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.7-1 through Figure 9.7-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Conklin has significant exposure. The maps show the location of potential new development, where available.



Figure 9.7-1. Town of Conklin Hazard Area Extent and Location Map 1

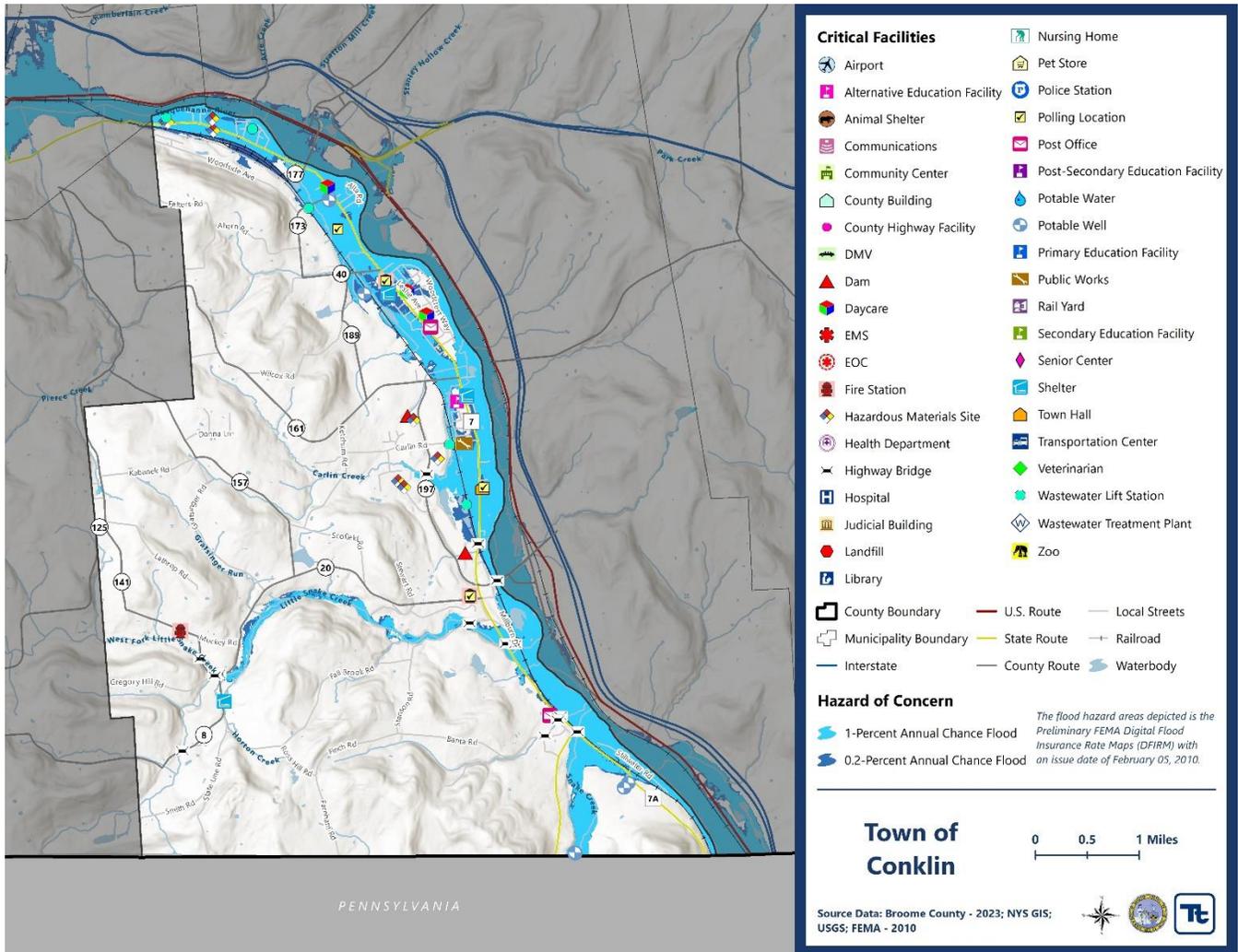
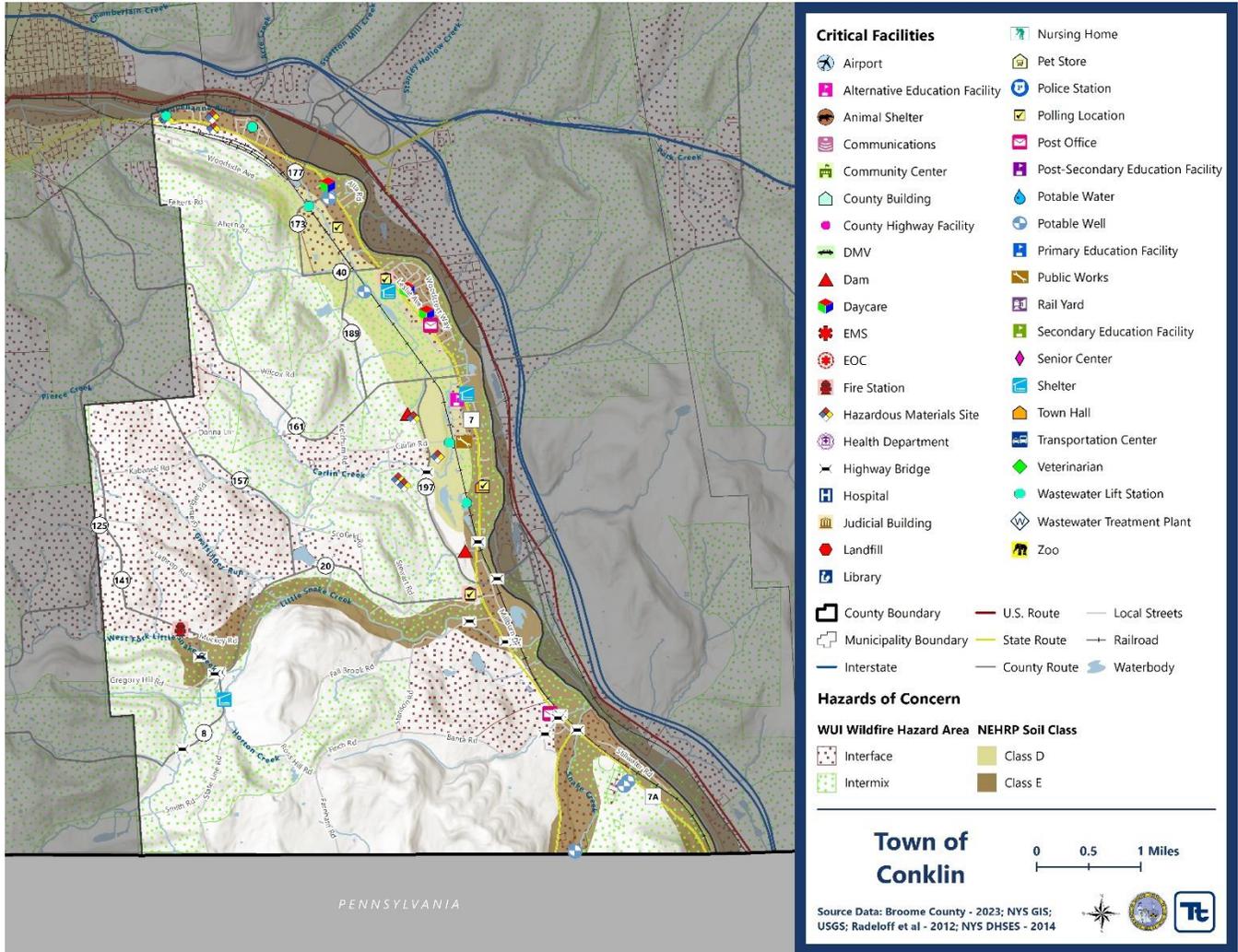




Figure 9.7-2. Town of Conklin Hazard Area Extent and Location Map 2





Hazard Event History

The history of natural and non-natural hazard events in the Town of Conklin is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.7-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.7-14. Hazard Event History in the Town of Conklin

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town enforced masking and social distancing mandates.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Town Highway Department crews had to cut and remove fallen trees along several roadways as well as plow the snow, however, the efforts were addressed during their day-to-day operations and did not result in significant damage or loss.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Conklin.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Conklin reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community.

Table 9.7-15 shows Conklin’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.





Table 9.7-15. Hazard Ranking

Hazard	Rank
Dam/Levee	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	High
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

Note: The scale is based on the hazard rankings established in Volume 1, Section 5.3 (Hazard Ranking) and modified as appropriate during review by the jurisdiction

Critical Facilities

Table 9.7-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.7-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Conklin Station 1	Fire Station	No	Yes	2024-ConklinT-02	-
Burke Pest Control	Hazardous Materials Facility	Yes	Yes	2024-ConklinT-02	-
Runway #684	Hazardous Materials Facility	Yes	Yes	2024-ConklinT-02	-
Ryder Truck Rental, Inc.	Hazardous Materials Facility	Yes	Yes	2024-ConklinT-02	-
The Shop Auto Repair and Tire Center, LLC	Hazardous Materials Facility	Yes	Yes	2024-ConklinT-02	-
Ryder Transportation Services #0525A	Hazardous Materials Facility	Yes	Yes	2024-ConklinT-02	-
Creek Briar Patch Well #2	Potable Well	Yes	Yes	2024-ConklinT-02	-
Creek Road Well #3	Potable Well	Yes	Yes	2024-ConklinT-02	-
Well #1	Potable Well	No	Yes	2024-ConklinT-02	-
Well #5	Potable Well	Yes	Yes	2024-ConklinT-02	-
Well #6	Potable Well	Yes	Yes	2024-ConklinT-02	-
Conklin Pump Station 1	Wastewater Lift Station	Yes	Yes	2024-ConklinT-02	-
Conklin Pump Station 2	Wastewater Lift Station	Yes	Yes	2024-ConklinT-02	-
Conklin Pump Station 4	Wastewater Lift Station	No	Yes	2024-ConklinT-02	-
Miller Street Pump Station	Wastewater Lift Station	Yes	Yes	2024-ConklinT-02	-





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Family Child Care	Daycare	Yes	Yes	2024-ConklinT-02	-
Town of Conklin	Public Works	No	Yes	2024-ConklinT-02	-
Conklin Town Hall	Town Hall	No	Yes	2024-ConklinT-02	-
Conklin Fire Station 1	Polling Location	No	Yes	2024-ConklinT-02	-
Conklin Community Center	Polling Location	Yes	Yes	2024-ConklinT-02	-
Bridge_1003560	Highway Bridge	No	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_1003580	Highway Bridge	No	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_1004350	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_1054390	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_2225490	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_2257600	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_3349250	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_3349270	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_3371100	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

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

- Broome Corporate Park Pond Dam #2

Identified Issues

After review of the Town of Conklin’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Conklin identified the following vulnerabilities within their community:

- The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.
- There are critical facilities in the Town that are located in the floodplain, including hazardous material facilities, potable wells, wastewater lift stations, polling locations, a daycare, fire station, public works, and a town hall. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.





- There are repetitive loss properties in the Town. Repetitively flooded properties place undue stress on the property owner and Town and efforts should be made to mitigate them. The Town would like to acquire additional open space for flood mitigation and preservation of water quality.
- The Town does not have a formalized list of damaged properties or property owners who may be interested in flood mitigation measures, such as elevation or acquisition.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The Town does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.
- The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about storm mitigation, preparation, response, and recovery.
- FEMA-issued effective FIRMs are in need of update, as the preliminary FIRMs more accurately address flood risk within the Town. Flood-prone areas within the Town include those shown within the SFHA on the FEMA preliminary FIRMs.
- The Town also has a high-hazard potential dam, the Broome Corporate Park Pond Dam #2, within its jurisdiction. This structure has the potential to impact those living nearby.
- The twin pipe culverts located on Banta Road frequently plug with debris causing localized flooding. The frequency of this problem is approximately every 3 years. During the events, at least 3 homes suffer basement flooding including damaged utilities. Heavy amounts of sediment/gravel/debris are deposited on Banta Road as well as the private properties. Cleanup typically takes several days. Approximately 1-2 acres of crops are damaged/lost in a nearby farm field. The road is closed for an average of 24 hours causing a lengthy detour. The pipes are approximately 205 feet long and replacement of them will be costly.
- Snake Creek (a major tributary to the Susquehanna River) is a source of frequent flash flooding causing public infrastructure damage, as well as damage to private property, homes, farms, and businesses. The frequency of flooding is almost annually to some degree. A farm and 3-4 homes are typically damaged during an event. Recently a State-owned bridge was compromised during an event. On several occasions, NYS Route 7A is closed for 1-2 days because the creek overtops the roadway.
- The Town needs additional open space for flood mitigation and preservation of water quality.
- Carol Court has drainage problems.
- The current flood damage prevention ordinance (1987) does not include NYS freeboard requirements.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*





9.7.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.7-17 indicates progress on the Town'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.

Additional Mitigation Efforts

The Town of Conklin did not identify any additional mitigation efforts completed since the last HMP.



Table 9.7-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Conklin-1	Banta Road Culverts	Flood, Severe Storm	Town DPW & Engineer	<p>Problem: The twin pipe culverts located on Banta Road frequently plug with debris causing localized flooding. The frequency of this problem is approximately every 3 years. During the events, at least 16 homes suffer basement flooding including damaged utilities. Heavy amounts of sediment/gravel/debris are deposited on Banta Road as well as the private properties. Cleanup typically takes several days. Approximately 1-2 acres of crops are damaged/lost in a nearby farm field. The road is closed for an average of 24 hours causing a lengthy detour. The pipes are approximately 205 feet long and replacement of them will be costly.</p> <p>Solution: Remove the culverts and construct a new road approximately 1440 feet in length. Need to acquire portions of 2 properties. Banta Road would be permanently closed just after Keith Lane. The concrete box culvert will be designed with concrete wing walls, headwalls, and cut-off walls to protect against scour. Portions of the stream will be armored with riprap to prevent erosion in the future.</p>	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable
T. Conklin-2	Snake Creek Flooding	Flood	Town Board & Engineer	<p>Problem: Snake Creek (a major tributary to the Susquehanna River) is a source of frequent flash flooding causing public infrastructure damage, as well as damage to private property, homes, farms, and businesses. The Snake Creek fills up faster than the Susquehanna and backs up. The frequency of flooding is almost annually to some degree. A farm and 3-4 homes are typically damaged during an event. Recently a State-owned bridge was compromised during an event. On several occasions, NYS</p>	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Route 7A is closed for 1-2 days because the creek overtops the roadway. Solution: Perform a design study to determine a feasible solution to mitigate the flood issues.		
T. Conklin-3	Encourage the development of acquisition and management strategies to preserve open space for flood mitigation and water quality in the floodplain.	Flood	Town of Conklin Planning Board	Problem: The Town needs additional open space for flood mitigation and preservation of water quality. Solution: The Town has completed three successful HMGP Property Acquisition projects and has recently received approval to acquire approximately 60 properties for a recently submitted HMGP Application. 2 homes were acquired in 2010.	1. No Progress 2. Financial constraints	1. Yes 2. Merge into Repetitive Loss action 3. Not applicable
T. Conklin-4	Implement a plan to alleviate the Schnurbush Park standing water issue.	Flood	Town of Conklin Engineering & Town DPW	Problem: Schnurbush Park is prone to standing water due to poor drainage. Solution: The project has been designed and approved. We are waiting for private property owners to sign the required easements.	1. Complete 2. Property owners signed required easements.	1. Discontinue 2. Not applicable 3. Project Completed
T. Conklin-5	Continue to implement Carol Court mitigation drainage activities.	Flood	Engineering, NYSDEC	Problem: Carol Court has drainage problems. Solution: The Carol Court drainage issue has been studied and the town has had a report prepared by a consultant identifying short, medium, and long-term mitigation goals/activities. This has been an ongoing project and some of the short-term mitigation activities have been accomplished.	1. No Progress 2. Financial constraints	1. Yes 2. Not applicable 3. Not applicable
T. Conklin-6	Protect Well #5 to the 500-year flood level	Flood	Town, facilities manager	Problem: The facility is in a 100-year floodplain. Solution: The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Conklin-7	Protect Well #6 to the 500-year flood level	Flood	Town, facilities manager	Problem: The facility is in a 100-year floodplain. Solution: The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable
T. Conklin-8	Protect the Conklin Pump Station 1 to the 500-year flood level	Flood	Town, facilities manager	Problem: The wastewater pump is in the 100-year floodplain. Solution: The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable
T. Conklin-9	Protect the Conklin Pump Station 2 from the 500-year flood level.	Flood	Town, facilities manager	Problem: The wastewater pump is in the 100-year floodplain. Solution: The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable
T. Conklin-10	Protect the Miller Street Pump Station 5 from the 500-year flood level.	Flood	Town, facilities manager	Problem: The wastewater pump is in the 100-year floodplain. Solution: The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable
T. Conklin-11	Protect the Conklin Community Center from the 500-year flood level	Flood	Town, facilities manager	Problem: The facility is a polling location and is in the 100-year floodplain. Solution: The Town is currently constructing a new Community Center located outside of the floodplain.	1. Discontinue 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Combine all critical facilities into one action 3. Not applicable
T. Conklin-12	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	Problem: The current flood damage prevention ordinance (1987) does not include NYS freeboard requirements. Solution: The flood damage prevention ordinance will be updated.	1. No Progress 2. Other Town priorities resulted in a delay in making progress with this action	1. Yes 2. Not applicable 3. Not applicable



Proposed Hazard Mitigation Initiatives for the HMP Update

Conklin participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Conklin 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 the Town’s priorities.

Table 9.7-18 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. Table 9.7-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.7-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee	X			X	X		X			X
Disease Outbreak				X			X			
Drought	X			X			X			X
Earthquake	X			X			X			X
Extreme Temperature	X			X			X			X
Flood	X	X		X	X	X	X		X	X
Invasive Species				X			X			
Severe Storm	X	X		X		X	X		X	X
Severe Winter Storm	X			X			X			X
Wildfire	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 stormwater 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 9.7-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-ConklinT-01	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-ConklinT-02	Critical Facilities in the Floodplain	1	1	1	1	1	0	0	1	1	0	1	1	1	0	10	Medium
2024-ConklinT-03	Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
2024-ConklinT-04	Flood Mitigation Interest	1	1	1	1	1	1	1	1	1	0	1	1	1	1	13	High
2024-ConklinT-05	Disaster Debris Management Plan	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High
2024-ConklinT-06	Public Education and Outreach	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-ConklinT-07	Flood Plain (FIRM) Map Updates	1	1	1	1	1	1	1	1	1	0	0	1	0	0	10	Medium
2024-ConklinT-08	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	0	1	1	1	0	11	High
2024-ConklinT-09	Banta Road Culverts	1	1	1	1	1	0	1	0	1	0	1	1	0	1	10	Medium
2024-ConklinT-10	Snake Creek Flooding	1	1	1	1	1	0	1	0	1	0	1	1	0	1	10	Medium
2024-ConklinT-11	Carol Court Drainage Improvements	0	1	1	1	1	1	1	1	1	1	0	1	0	0	10	Medium
2024-ConklinT-12	Update the Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High

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



Action 2024-ConklinT-01. Socially Vulnerable Populations Outreach

Action Name:	Action 2024-ConklinT-01. Socially Vulnerable Populations Outreach	
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website	
Lead Agency:	Town Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	
Impact on Critical Facilities/Lifelines:	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.	





Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving the guidance.



Action 2024-ConklinT-02. Critical Facilities in the Floodplain

Action Name:	2024-ConklinT-02. Critical Facilities in the Floodplain	
Description of the Problem:	There are critical facilities in the Town that are located in the floodplain, including hazardous material facilities, potable wells, wastewater lift stations, polling locations, a daycare, a fire station, public works, and a town hall. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>Coordinate with the facility managers at the identified critical facilities to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.</p> <p>Phase 1: Identify the most cost-effective mitigation option.</p> <p>Phase 2: Work with the facility manager to implement selected action based on available funding and local match ability.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Town Council, Facility Managers	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Town Budget, Private Owners	
Implementation Timeline:	5 years	
Goals Met:	1, 3, 5	
Benefits:	This action will remove or reduce critical facility and community lifeline vulnerability to flood hazards and remove or reduce safety risks for first responders.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.	
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	





Impact of Capabilities:	This action will enhance the Town’s current NFIP capabilities.	
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	
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. As sea level rises due to climate change, the area of the flood hazard may expand.	
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
Alternatives	Action	Evaluation
	No action.	The current problem continues.
	Floodproof existing structures.	May not necessarily reduce risk.
	Construct floodwalls to stop flood issues.	Will most likely interrupt natural floodplain function.



Action 2024-ConklinT-03. Repetitive Loss Properties

Action Name:	2024-ConklinT-03. Repetitive Loss Properties	
Description of the Problem:	There are repetitive loss properties in the Town. Repetitively flooded properties place undue stress on the property owner and Town and efforts should be made to mitigate them. The Town would like to acquire additional open space for flood mitigation and preservation of water quality.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will promote and support non-structural flood hazard mitigation alternatives for at-risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be funding, benefits versus cost, and willing participation of property owners. The Town has completed three successful HMGP Property Acquisition projects and has recently received approval to acquire approximately 60 properties for a recently submitted HMGP Application. 2 homes were acquired in 2010.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Broome County	
Estimated Cost:	Medium	
Potential Funding Sources:	FEMA FMA, FMA SWIFT, Town Budget, County Budget, Property Owners	
Implementation Timeline:	3 years	
Goals Met:	1, 5	
Benefits:	This action would foster comprehensive floodplain management by removing at-risk properties from the flood hazard area or elevating properties to reduce the flood risk.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.	
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	This action will enhance the Town’s current NFIP capabilities.	



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.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		The current problem continues.
	Construct flood walls/barriers around vulnerable areas.		Costly and can divert floodwaters to other areas.
	Deployable flood barriers for vulnerable areas.		Requires a great deal of work to implement prior to each event.



Action 2024-ConklinT-04. Flood Mitigation Interest

Action Name:	2024-ConklinT-04. Flood Mitigation Interest	
Description of the Problem:	The Town does not have a formalized list of damaged properties or property owners who may be interested in flood mitigation measures, such as elevation or acquisition.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Floodplain Administration will develop a list for inventorying systems, or properties damaged by flood events and property owners who are interested in flood mitigation measures, such as elevation or acquisition.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Planning Board, Zoning Board, Village Administration, Town Council	
Estimated Cost:	Staff time, Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	Within 2 years	
Goals Met:	1, 3, 5, 6	
Benefits:	Keeping a list of damaged properties and property owners interested in flood mitigation efforts may lead to the elimination of flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Collecting data regarding homeowners who reside within flood-prone areas provides an opportunity to introduce location-specific opportunities for assistance. Removing homes from the floodplain immediately removes the risk to life and property.	
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	This action will create a new Town capability while enhancing its current NFIP capabilities.	
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.	



Climate Change Considerations:	<p>A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. Areas experiencing flooding conditions may increase. 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.</p>		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		The current problem remains.
	Only share opportunities when notified of grant funding.		May not be enough time to garner interest or write the application.
	Wait for information from the State on flood-damaged properties.		Maybe a delay in notice.



Action 2024-ConklinT-05. Disaster Debris Management Plan

Action Name:	2024-ConklinT-05. Disaster Debris Management Plan	
Description of the Problem:	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The Town does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for the execution of the plan. The plan will align with permitted temporary collection areas.	
Lead Agency:	Town Highway Department	
Supporting Agencies:	Town Council, Town Public Safety Entities, Broome County	
Estimated Cost:	Staff time	
Potential Funding Sources:	Town budget	
Implementation Timeline:	Within 5 years	
Goals Met:	3, 4, 5, 6	
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	The action will result in increased post-disaster capabilities.	
Impact of Capabilities:	N/A	
Impact on Future Development:	N/A	



Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		-
	Rely on federal cleanup.		These services may or may not be available.
	Rely on state cleanup.		These services may or may not be available.



Action 2024-ConklinT-06. Public Education and Outreach

Action Name:	2024-ConklinT-06. Public Education and Outreach	
Description of the Problem:	The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about storm mitigation, preparation, response, and recovery.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.	
Lead Agency:	Town Council	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	1 year	
Goals Met:	1, 2, 3	
Benefits:	This action will improve the current public education and outreach program in the Town by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the Town.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" 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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the various hazards that may impact them in the Town.	
Impact on Critical Facilities/Lifelines:	Businesses, which may be considered critical facilities or lifelines, would be more informed on how to prepare for emergency events and mitigate the risks of potential hazards. With these businesses becoming more resilient, this action would contribute to their continuity of operations.	
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.	
Impact on Future Development:	N/A	





Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No action.	Current methods remain the only ones used.	
	Rely on state or federal resources.	Resources may be generalized and not specific to the risks in the Village.	
	Use only a few methods for distribution.	Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.	



Action 2024-ConklinT-07. Flood Plain (FIRM) Map Updates

Action Name:	2024-ConklinT-07. Flood Plain (FIRM) Map Updates	
Description of the Problem:	FEMA-issued effective FIRMs are in need of an update, as the preliminary FIRMs more accurately address flood risk within the Town. Flood-prone areas within the Town include those shown within the SFHA on the FEMA preliminary FIRMs.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Work with Broome County to submit a request to FEMA to update the FIRMs that contain the Town. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC, and USGS; and identification of flood-prone areas outside of currently designated areas.	
Lead Agency:	Town Council	
Supporting Agencies:	Broome County, NYSDEC, NYSDHSES, USGS, FEMA	
Estimated Cost:	Low	
Potential Funding Sources:	Staff Time, HMGP	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 6	
Benefits:	Updating FIRMs will provide a more complete picture of the floodplain and the overall flood hazard in the Town. This will inform other sectors of the community, including land use, development, permitting, and codes and standards.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" 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)
Impact on Socially Vulnerable Populations:	An analysis of the floodplain will inform future community development and land use and prevent vulnerable populations from residing in areas of heightened flood risk.	
Impact on Critical Facilities/Lifelines:	The creation of updated floodplain maps will inform efforts to increase the resilience of critical infrastructure that is present in those areas, including transportation routes, water treatment plants, and other utility services. This will also aid in preventing future development of infrastructure in these areas.	
Impact of Capabilities:	An understanding of the floodplain will allow for the development of processes, plans, training, and staff placement to address flooding issues in the areas of greatest concern before they occur.	





Impact on Future Development:	Updated FIRMs will decide which populations and structures will require flood insurance to be built in areas of flood hazard.		
Climate Change Considerations:	The maps that are developed as a result of this action may not remain current or valid for the length of time that they may have in the past due to changes in floodplains and increases in extreme rainfall events.		
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Maps will remain outdated.
	Request update only for areas with unmarked bodies of water.		The remainder of Town may remain inaccurate.
	Request update for areas only along currently delineated SFHA.		The remainder of Town may remain inaccurate.



Action 2024-ConklinT-08. Dam Owner Partnership

Action Name:	2024-ConklinT-08. Dam Owner Partnership		
Description of the Problem:	The Town has a high-hazard potential dam, the Broome Corporate Park Pond Dam #2, within its jurisdiction. This structure has the potential to impact those living nearby.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will work with the owner of the dam to ensure inspections and safety procedures are up to date. EAPs will be collected by the Township and shared with Broome County.		
Lead Agency:	Town Council		
Supporting Agencies:	Broome County, NYSDEC, Dam Owner		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget (Staff Time)		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 3, 4, 5		
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.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
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 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.		
Impact of Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.		
Impact on Future Development:	Any future development near the dam will have enhanced safety.		
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. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action.	Township will be unaware of any safety concerns for the dam or its condition.
	Utilize information from NYSDEC.	Owners may not be required to submit a safety plan to the State.
	Utilize information from the National Inventory of Dams.	Not all dams are listed on the inventory.



Action 2024-ConklinT-09. Banta Road Culverts

Action Name:	2024-ConklinT-09. Banta Road Culverts	
Description of the Problem:	The twin pipe culverts located on Banta Road frequently plug with debris causing localized flooding. The frequency of this problem is approximately every 3 years. During the events, at least 3 homes suffer basement flooding including damaged utilities. Heavy amounts of sediment/gravel/debris are deposited on Banta Road as well as the private properties. Cleanup typically takes several days. Approximately 1-2 acres of crops are damaged/lost in a nearby farm field. The road is closed for an average of 24 hours causing a lengthy detour. The pipes are approximately 205 feet long and replacement of them will be costly.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Remove the culverts and construct a new road approximately 1440 feet in length. Need to acquire portions of 2 properties. Banta Road would be permanently closed just after Keith Lane. The concrete box culvert will be designed with concrete wing walls, headwalls, and cut-off walls to protect against scour. Portions of the stream will be armored with riprap to prevent erosion in the future.	
Lead Agency:	Town Engineer	
Supporting Agencies:	Highway Department	
Estimated Cost:	High	
Potential Funding Sources:	Consolidated Local Street and Highway Improvement Program (CHIPS), Bridge NY Program, FEMA PDM	
Implementation Timeline:	Within 5 years	
Goals Met:	1	
Benefits:	The removal of culverts will result in fewer or remove the clogging of debris, which has been causing basements to flood, farm crops to be damaged, and road closures (man hours and equipment). The stream and roadway will no longer require maintenance within this area after a storm event.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.	
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 of Capabilities:	Not applicable		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
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.		
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		Continued flooding and property damage.
	Replace twin culverts with a single-span concrete box.		Not cost-effective.
	Change the skew of the culvert to shorten by almost half. Install a new single-span concrete box culvert.		Not cost-effective.



Action 2024-ConklinT-10. Snake Creek Flooding

Action Name:	2024-ConklinT-10. Snake Creek Flooding	
Description of the Problem:	Snake Creek (a major tributary to the Susquehanna River) is a source of frequent flash flooding causing public infrastructure damage, as well as damage to private property, homes, farms, and businesses. The frequency of flooding is almost annually to some degree. A farm and 3-4 homes are typically damaged during an event. Recently a State-owned bridge was compromised during an event. On several occasions, NYS Route 7A is closed for 1-2 days because the creek overtops the roadway.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Perform a design study to determine a feasible solution to mitigate the flood issues.	
Lead Agency:	Town Engineer	
Supporting Agencies:	Town Council	
Estimated Cost:	High	
Potential Funding Sources:	FEMA PDM, HMGP, HMA if any NFIP properties	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.	
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 of Capabilities:	N/A	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	
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.	





Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No Action.	Continued flooding and damage.	
	Relocation of structures.	The bridge would remain at risk.	
	Acquisition of properties.	If not cost-effective, the bridge would remain at risk.	



Action 2024-ConklinT-11. Carol Court Drainage Improvements

Action Name:	2024-ConklinT-11. Carol Court Drainage Improvements	
Description of the Problem:	Carol Court has drainage problems. The Carol Court drainage issue has been studied and the town has had a report prepared by a consultant identifying short, medium, and long-term mitigation goals/activities. This has been an ongoing project and some of the short-term mitigation activities have been accomplished.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Reassess the consultant’s report and implement additional mitigation activities to resolve the drainage problems on Carol Court.	
Lead Agency:	Engineering	
Supporting Agencies:	Highway Department	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget	
Implementation Timeline:	5 years	
Goals Met:	1, 5	
Benefits:	The Town will have upgraded the drainage systems on Carol Court to be able to manage stormwater, mitigating the flood hazard.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding. Furthermore, this action will assist in keeping roadways clear of flood waters for the populations that may need to attend medical appointments or require medical attention from first responders.	
Impact on Critical Facilities/Lifelines:	This action would assist in the reduction of roadway flooding, permitting first responders to traverse the roadways safely.	
Impact of Capabilities:	This action will strengthen the Town’s stormwater management capabilities.	
Impact on Future Development:	Future development adjacent to the Susquehanna River will have enhanced protections from the flood hazard and severe storm impacts.	
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 that contribute to flooding. This action will increase the carrying capacity of the culverts to account for increased stormwater volumes.	





Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		The current problem remains.
	Construct flood walls/barriers around vulnerable areas.		Costly and can divert floodwaters to other areas.
	Implement green infrastructure.		There may be insufficient space for green infrastructure to be effective.



Action 2024-ConklinT-12. Update the Flood Damage Prevention Ordinance

Action Name:	2024-ConklinT-12. Update the Flood Damage Prevention Ordinance		
Description of the Problem:	The current flood damage prevention ordinance (1987) does not include NYS freeboard requirements.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town’s Flood Damage Prevention Ordinance will be updated to meet or exceed the New York State freeboard requirements.		
Lead Agency:	Floodplain Administrator		
Supporting Agencies:	Construction Official, Town Council, NFIP State Coordinator, FEMA Regional Office		
Estimated Cost:	Staff time		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 6		
Benefits:	The updated ordinance will improve floodplain management, meet NYS and NFIP requirements, and increase the resilience of new and substantially improved structures in the floodplain.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	The action will result in better regulation of construction standards within the Special Flood Hazard Area where significant risk to socially vulnerable populations exists.		
Impact on Critical Facilities/Lifelines:	Critical facilities and lifelines located in the Special Flood Hazard Area will be required to meet the same requirements as general building construction that are set forth in the ordinance.		
Impact of Capabilities:	This action will improve floodplain management capabilities through better outlining of responsibilities and administrative procedures.		
Impact on Future Development:	The action will result in stronger regulation of construction standards for future development in the Special Flood Hazard Area.		
Climate Change Considerations:	The updated ordinance includes the State’s standards that are in place to address heightened flood risk due to climate change such as those for floodway rise and mandatory freeboard.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action.	The current problem exists.
	Rewrite the full, existing flood damage prevention ordinance.	Time intensive.
	Leave NFIP.	Residents lose flood insurance coverage.



SECTION 9.

9.8 VILLAGE OF DEPOSIT

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

9.8.1 Hazard Mitigation Planning Team

The Village of Deposit identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Public Works Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.8-1 Volume 1 summarizes Village officials who participated in the development of the annex and in what capacity. It also includes additional documentation of the Village’s planning activities through Planning Partnership Volume 1.

Table 9.8-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Steve Evans / Public Works Supervisor Address: 61 Front St., Deposit NY 13754 Phone Number: (607) 467-1118 Email: vod.supervisor.evans@gmail.com	Name/Title: Bryan Moore / Mayor Address: 61 Front St., Deposit NY 13754 Phone Number: 607 467 2492 Email: Vod.Mayor1@gmail.com
NFIP Floodplain Administrator	
Name/Title: Pete Hathaway / Code Enforcement, Flood Plain Administrator Address: 61 Front St., Deposit, NY 13754 Phone Number: 607-467-2492 Email: vod.code.hathaway@gmail.com	
Additional Contributors	
Name/Title: Pearl Strauss / Administrative Assistant Method of Participation: Provided input on Village capabilities, reviewed draft annex	
Name/Title: Karen Budine / Clerk-Treasurer Method of Participation: Provided input on Village capabilities, reviewed draft annex	
Name/Title: Steve Evans / Public Works Supervisor	





Method of Participation: Provided input on Village capabilities and hazard ranking, completed hazard event history, reviewed previous actions, reviewed draft annex
Name/Title: Bryan Moore / Mayor Method of Participation: Provided input on Village capabilities and hazard ranking, completed hazard event history, reviewed previous actions, reviewed draft annex
Name/Title: Pete Hathaway / Code Enforcement, Flood Plain Administrator Method of Participation: Provided input on Village capabilities and hazard ranking, completed NFIP summary table, reviewed draft annex

9.8.2 Municipal Profile

Deposit is a village in Broome and Delaware counties. The village, on the county line, is half within the town of Sanford (Broome County) and half within the town of Deposit (Delaware County). The village is located by the West Branch of the Delaware River and the Southern Tier Expressway (New York Route 17). The village is 30 miles east of Binghamton and 3 miles north of the Pennsylvania border.

Home rule is strong in New York State and thus, each town and village has its own governing body. Towns are made up of a Town Board and Supervisor. Villages generally have a Mayor, Clerk, and Council. Along with town and village roads, any public water and sewer systems are operated by the local municipality, though they may cooperate with County departments. Each municipality has charge over its planning and zoning and uses the County personnel as a resource (Tetra Tech 2019). According to the U.S. Census, the 2020 population of the Village of Deposit was 1,387, a 16.6 percent decrease from the 2010 Census.

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 several 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 2017-2021 American Community Survey indicates that 6.8 percent of the population is 5 years of age or younger, 15.3 percent is 65 years of age or older, 0 percent is non-English speaking, 21.2 percent is below the poverty threshold, and 17.1 percent is considered disabled.

9.8.3 Jurisdictional Capability Assessment and Integration

The Village of Deposit 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Village of Deposit to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.8-2 summarizes the regulatory tools that are available to the Village of Deposit. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.8-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	LL#1 of 2008	State and Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This local law provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in this Village. This local law is adopted pursuant to section 10 of the Municipal Home Rule Law. Except as otherwise provided in the Uniform Code, other state law, or other sections of this local law, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this local law. The Code Enforcement Officer administers and enforces all the provisions of the Uniform Code, the Energy Code, and this local law.				
Zoning/Land Use Code	Yes	Chapter 140 Zoning	Local	Administrative Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The code enables where appropriate, flexibility of design and development of land in such a manner as to preserve its natural and scenic qualities, protect areas of meaningful ecological value, reduce flood hazards, facilitate the adequate and economical provision of streets and utilities, minimize negative environmental impacts, improve the aesthetic quality of new residential developments, encourage the conservation of energy, increase recreational opportunities, and otherwise promote the planned and environmentally desirable use of land.				
Subdivision Code	Yes	LL#4 of 2008	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> By the authority of the resolution of the Village Board of the Village of Deposit pursuant to the provisions of Article 7 of the Village Law of the State of New York, the Planning Board of the Village of Deposit is authorized and empowered to review and approve plats for the subdivision of land. Land within the Village of Deposit may be subdivided into lots, blocks, or sites, with or without streets or highways, only if approved by the Village of Deposit Planning Board ("the Planning Board") in accordance with the procedures and requirements as set forth in this Local Law, and only if the approved plat is duly filed in the office of the County Clerk of Delaware County, New York, or Broome County, New York, as applicable. Construction, excavation, filling, re-grading, clearing of vegetation, or other similar activities shall not begin within any area proposed or intended for subdivision until said subdivision has been approved, or conditionally approved, by the Planning Board.				
Site Plan Code	Yes	Chapter 140 Zoning, Article IV	Local and County	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> No building permit nor certificate of occupancy shall be issued except for buildings or uses in conformity with a site development plan approved by the Planning Board. The following are exempt from site plan review: agricultural buildings and				





9.8. Village of Deposit

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
uses, single-family detached and semi-detached residences, two-family detached and semi-attached residences, mobile homes, accessory uses to these principal uses, residential and nonresidential signs and building additions that do not generate additional parking needs.				
Stormwater Management Code	Yes	LL#1 of 2007	Local	Village Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction.				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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> <ul style="list-style-type: none"> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit. 				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Chapter 80 - Flood Damage Prevention (Local Law #4 – 2011)	Federal, State, County, and Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to regulate uses, properties, and development that are vulnerable to flood damage. New construction and substantial improvements in areas that have base flood elevation data must be built with one foot of freeboard. In areas without base flood elevation data, new construction and substantial improvements must be built with two feet of freeboard.				
Wellhead Protection	Yes	Aquifer Planning LL#3 of 1985	Local	Village Board/ DPW Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In adopting the Aquifer Planning Local Law, the Village Board is desirous of preventing the introduction to the watershed of materials that pose a threat to the watershed and hence public health and safety. These include chemicals, petroleum products and by-products, salts, and hazardous substances.				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Planning Documents				
General/Comprehensive Plan	Yes	Village of Deposit Comprehensive Plan, June 2017	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>This Comprehensive Plan is intended, in part, to prepare the Village of Deposit for the next ten years with the broad goals of enhancing the social and economic vitality of the community, making it more resilient to natural disasters, expanding housing and employment opportunities, and lowering the community's carbon footprint through energy conservation and other strategies. Deposit's challenge and planning vision is to accommodate new growth while retaining its unique heritage and enhancing the Village's character and quality of life.</p> <p>This Comprehensive Plan includes a concise statement of a community's vision for development, along with goals, objectives, principles, guidelines, policies, standards, devices, and instruments for the immediate and long-range implementation of the vision. Goals provide general direction based on the aspirations of the community, and objectives and policies provide further direction for achieving an aspect of a goal.</p> <p>This Comprehensive Plan serves as the general guide for the Village Board in its legislative and budgeting role, the Village of Deposit Planning Board ("Planning Board") in its site plan and subdivision review and approval role, the Zoning Board of Appeals in its quasi-judicial role, along with Village staff members, citizens, business owners and landowners with respect to directing development and redevelopment within the Village of Deposit.</p>				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	Yes	Stormwater Management Plan, January 2007	Local	Public Works Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>The Stormwater Management Plan documents the Village's strategy for addressing stormwater management and stormwater-related impacts related to land development. This plan addresses the impacts of land development on groundwater recharge, stormwater quality, and stormwater quantity. The impacts are addressed by incorporating stormwater design and performance standards for new major development. The plan describes long-term operation and maintenance measures for existing and future stormwater facilities.</p>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	Yes	Village of Deposit Comprehensive Plan, June 2017	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>For Deposit to prosper, future growth within the community must involve new investments in its Downtown, commercial gateways, industrial-zoned areas, and agricultural sector, along with the adaptive reuse of underutilized buildings and sites with access to existing water or sewer infrastructure. The community also needs to stimulate reinvestment in its housing stock,</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>which is needed for residents and helps to define the unique sense of place of Deposit. This Plan supports an environment that fosters growth in agriculture, businesses, and industries, which creates employment opportunities. This Plan also recognizes successful economic and community development efforts must also include diversified housing opportunities for employees at various economic levels.</p>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	Yes	Village of Deposit Comprehensive Plan, June 2017	Local	Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Village’s transportation system provides the means that enable its residents, businesses, and visitors to get around the community and to the surrounding region. It is an important goal of this Comprehensive Plan to provide an interconnected, multi-modal transportation system, which provides safe and efficient access to all properties and land uses.</p> <p>The Village is committed to ensuring its transportation system continues to serve vehicular travel but would like to enhance mobility options for its residents and businesses. Such options include improved pedestrian access along the Village’s sidewalk system through sidewalk enhancements, the creation of a trail system to better connect residents to Downtown, institutions, and recreational resources; the designation of bike lanes on roads or streets through “Complete Streets” enhancements; and improved rail access to industries.</p> <p>The Village seeks to reduce its carbon footprint by ensuring its transportation system provides viable mobility options to its residents and businesses, so they are not solely dependent on automobiles for travel and transport. The Village is also committed to reducing its carbon footprint by employing best management practices within its vehicle fleet while promoting alternative modes of transportation, including biking, public transit, rail, and walking.</p>				
Agriculture Plan	Yes	Village of Deposit Comprehensive Plan, June 2017	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>This Plan seeks the long-term preservation of the Village’s agricultural resources, promotes diversity of farm types, and supports the economic viability of the farming community and the profitability of each farm that lies within the Village. It also strongly supports the right-to-farm to protect existing farms from nuisance suites from new residential development that may encroach on farms or new residents who are unaccustomed to farming.</p>				
Climate Action/ Resiliency/Sustainability Plan	Yes	Village of Deposit Comprehensive Plan, June 2017	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>For this Plan, sustainable land use patterns are very generally defined as 1) focusing future development toward lands served by existing public sewer and water infrastructure and by alternative forms of transportation (i.e. walking, biking, and public transportation); and 2) focusing preservation efforts toward environmentally sensitive and active agricultural lands. Most of the Village has already been developed and the balance is difficult to develop because it is environmentally sensitive (e.g., steep slopes or flood-prone areas). Much of the undeveloped lands in the Village are preserved as open space or utilized as active farmland. However, scattered infill opportunities are located throughout the Village. While infill development is in some respects inherently sustainable (since it does not rely upon new streets or the extension of infrastructure) this Plan calls for infill development to be compatible with existing development to protect the unique character of the Village of Deposit.</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
The fundamental purpose of this Plan is to ensure that planning and development are done in a manner that allows future generations to enjoy the same or more opportunities in terms of employment and housing options, access to open space and natural resources, vibrant community life, and environmental health.				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	Yes	Village of Deposit Comprehensive Plan, June 2017	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Downtown business district has many beautiful and prominent mixed-use buildings that provide an excellent foundation for a vibrant mixed-use center. However, many storefronts are vacant and there is a general sense of disinvestment that detracts from the historic character of Downtown. To reverse these trends, the Village of Deposit is spearheading the Front Street Rehabilitation project that will replace water, sewer, and drainage infrastructure and enhance the streetscape with new sidewalks and amenities to make the physical environment of Downtown more appealing. It has also adopted Design Guidelines to ensure that renovations of historic buildings complement the original architecture of its Downtown mixed-use buildings. The Design Guidelines, which were adopted by the Village Board on May 27, 2014, are incorporated into this Comprehensive Plan in its entirety by reference.				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Village of Deposit CEMP, May 2022	Local	Emergency Management
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Comprehensive Emergency Management Plan aims to assess the Village's ability to respond to emergencies and identifies recommendations to improve its capacity to prepare and respond to future events. The plan addresses both short- and long-term recovery.				
Continuity of Operations Plan	Yes	Continuity of Operations Plan, May 2022	Local	Emergency Management
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Continuity of Operations (COOP) Plan is intended to guide departments, divisions, and offices in the continued provisions of essential operations and the re-establishment of critical business functions during and after a disaster occurs. Continuity planning is a critical piece of overall emergency management which encompasses prevention, preparedness, mitigation, response, and recovery from a disaster.				
Substantial Damage Response Plan	Yes	Substantial Damage Response Plan, May 2022	County, Local	Public Works, Fire Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The substantial damage response plan describes the Village's process for evaluating damage to buildings and addressing those that have been substantially damaged. The plan evaluates potential damage to buildings, examines what can be done to mitigate the potential for damage to those buildings, and lays out the strategy to address substantial damage after any hazardous event.				
Threat & Hazard Identification & Risk Assessment	Yes	Threat & Hazard Identification & Risk Assessment, May 2022	County, Local	Public Works, Fire Department
<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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
The THIRA helps the Village understand its risks and determine the level of capability needed to address those risks. The THIRA focuses on identifying the threats and hazards of greatest concern to the Village and determining what levels of capability are needed to manage those risks as well as any lesser risks that have been identified.				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.8-3 summarizes the capabilities of the Village of Deposit to oversee and track development.

Table 9.8-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Enforcement
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain development
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	A very high percentage of Deposit’s land area is already developed. There are very few vacant parcels and those that remain have limited development potential due to environmental constraints (e.g., steep slopes or floodplains).

Administrative and Technical Capability

Table 9.8-4 summarizes potential staff and personnel resources available to the Village of Deposit and their current responsibilities that contribute to hazard mitigation.

Table 9.8-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Village of Deposit’s Planning Board provides for the orderly and systematic review of development activities





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		within the Village of Deposit. This is subject to Site Plan Review and/or a Special Use Permit as required by Village Zoning. This board also presents both advisory comments and recommendations to the Village Board of Trustees relating to the Village's Comprehensive Plan, or amendments thereto, and issues of planning and development within the Village. Members serve a five-year term.
Zoning Board of Adjustment	Yes	The Village of Deposit Zoning Board of Appeals is appointed by the Mayor and charged with enforcing the provisions of the Village Zoning Ordinance. Public meetings are held to hear and make decisions on various petitions submitted to the Board for Zoning Map Amendments Special Use Permits and Variations to the Zoning Ordinance. Members serve a 3-year term.
Planning Department	Yes	Town Planning Advisory Service contract which gives us access to professional Planning for our Planning and Zoning Boards as well as technical support for Code Enforcement
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Deposit Public Works Department is responsible for the operation of the Village facilities and infrastructures. The department maintains the Village streets, water, sewers, and storm drains as well as public buildings and service facilities. The department also plows and cleans streets and maintains the Village's forestry in addition to many other activities.
Construction/Building/Code Enforcement Department	Yes	The Code Enforcement Officer is responsible for enforcing the State codes, regulations, and local laws of the Village of Deposit. The officer administers and enforces the zoning regulations assists with applicants, inspects sites, reviews building applications, and investigates complaints.
Emergency Management/Public Safety Department	Yes	The Village Board, BC Sheriff, and the Village of Deposit Fire Department work together to provide Emergency Management and Public Safety.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Deposit Public Works Department is responsible for the operation of the Village facilities and infrastructures. The department maintains the Village streets, water, sewers, and storm drains as well as public buildings and service facilities. The department also plows and cleans streets and maintains the Village's forestry in addition to many other activities.
Mutual aid agreements	Yes	The Village of Deposit has multiple mutual aid and shared service agreements.
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Other: Economic Development Revolving Loan Fund Program (EDRLF)	Yes	The EDRLF is a Village loan program intended to expand and diversify the area’s economy; provides financing opportunities for entrepreneurs and existing businesses to overcome limited access to investment capital; and ensures that the benefits of these growing industries benefit the local economy and job market.
Other	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Broome County and Delaware County Planning Department Town Planning Advisory Service
Engineers or professionals trained in building or infrastructure construction practices	Yes	Keystone Engineer
Planners or engineers with an understanding of natural hazards	Yes	Broome County and Delaware County Planning Department Town Planning Advisory Service
Staff with expertise or training in benefit/cost analysis	Yes	Delaware County Planning Department
Professionals trained in conducting damage assessments.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Broome County and Delaware County Planning Department Town Planning Advisory Service
Environmental scientists familiar with natural hazards	Yes	Delaware County Soil and Water Conservation
Surveyor(s)	Yes	Keystone Engineer
Emergency Manager	Yes	The Fire Chief is the Village’s Emergency Manager
Grant writer(s)	Yes	Deposit Village Planning Board, Delaware County Engineer
Resilience Officer	No	-
Other Certified Floodplain Manager	Yes	Town Planning Advisory Service Contract and Water Conservation District
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

Table 9.8-5 summarizes financial resources available to the Village of Deposit.

Table 9.8-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds.	Yes





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

Education and Outreach Capability

Table 9.8-6 summarizes the education and outreach resources available to the Village of Deposit.

Table 9.8-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	Yes	The Community Resources webpage contains information on flood and floodplain awareness and natural gas drilling; the Web Links webpage contains links to hazard mitigation-related websites, including FEMA, Homeland Security, Ready Gov, and inundation maps.
Social media for hazard mitigation education and outreach	Yes	The Village has a Facebook page which can be utilized to share information on hazard mitigation.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	NY ALERT is available for residents to utilize.
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.8-7 summarizes classifications for community programs available to the Village of Deposit.

Table 9.8-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)*	Yes	-	2022
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	2022
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
Storm Ready Certification	Yes	N/A	N/A
Firewise Communities classification	No	-	-
Other	No	-	-

Note:
N/A Not applicable





- Unavailable
- * At the time of the writing of this plan, the Village was unable to identify its BCEGS classification.

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 9.8-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.8-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

9.8.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.8-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.8-9 summarizes the NFIP statistics for the Village of Deposit.

Table 9.8-9. Village of Deposit NFIP Summary of Policy and Claim Statistics

# Policies	48
# Claims (Losses)	116
Total Loss Payments	\$2,867,481
# Repetitive Loss Properties (NFIP definition)	9

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.

Source: FEMA Region II October 2023





Flood Vulnerability Summary

Table 9.8-10 provides a summary of the NFIP program in the Village of Deposit.

Table 9.8-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Multiple roads are located in the floodplain (Dublin Street, Old Oquaga Lake Road, Old River Road, Mill Street, Village Street, Front Street, 2 nd Street, Center Street, and Dean Street, among others outside of Broome County).
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	Yes
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	None
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	By inspection and value.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	Four properties have been mitigated. The source of funding for the four identified properties was not identified during this plan update.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	Yes, through the Town Planning Advisory Service contract with the Delaware County Planning Department and Soil and Water Conservation District.
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Review flood maps, assist homeowners receive elevation certificates
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	If more than 50% of the current value is added to the home or business



NFIP Topic	Comments
What are the barriers to running an effective NFIP program in the community, if any?	Updated maps
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	2023
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 80 - Flood Damage Prevention (Local Law #4 – 2011)
What is the date that your flood damage prevention ordinance was last amended?	April 12, 2011
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets minimum requirements
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The planning and zoning boards consider efforts to reduce flood risk.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Village would consider joining the CRS program.

9.8.5 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 9.8-11 through Table 9.8-13.

Table 9.8-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0





	New Construction Permits Issued			
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

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

Table 9.8-12. Recent Major Development and Infrastructure from 2018 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
Dollar General	Commercial	1	349.17-3-13 16 Pine Street	Zone A, Flood	Commercial Store
44 Main Street	Residential	1	349.13-4-10 44 Main Street	Zone A, Flood	New Manufactured Home
50 Main Street	Residential	1	349.13-4-14 50 Main Street	Zone A, Flood	New Manufactured Home

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

Table 9.8-13. 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
4 Pine Street	Residential	1	349.17-4-9.2 4 Pine Street	Zone A, Flood	Potential Manufactured Home

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

9.8.6 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 Village of Deposit’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Village are shown in Figure 9.8-1 through Figure 9.8-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Deposit has significant exposure. The maps show the location of potential new development, where available.





Figure 9.8-1. Village of Deposit Flood Hazard Area Extent and Location

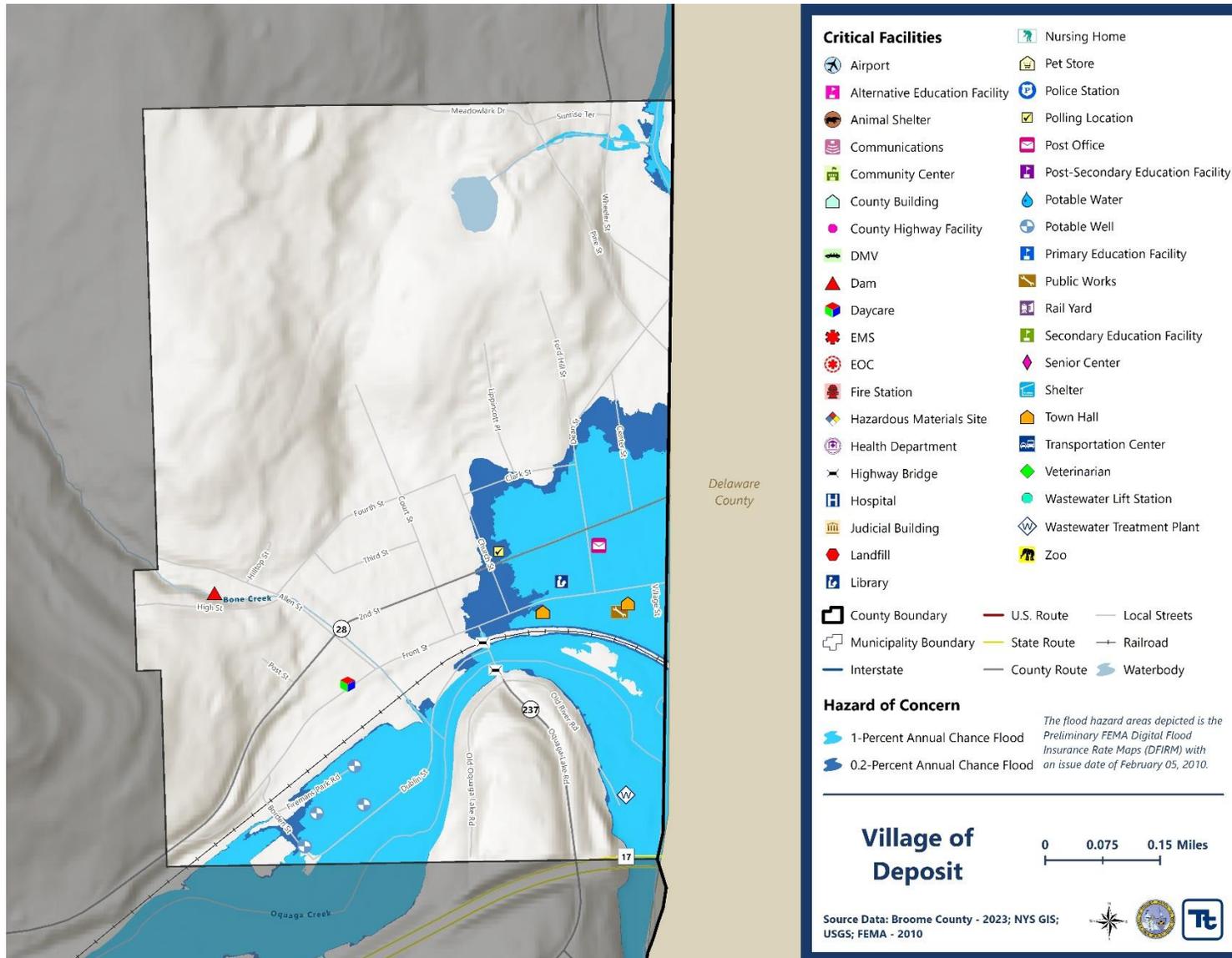
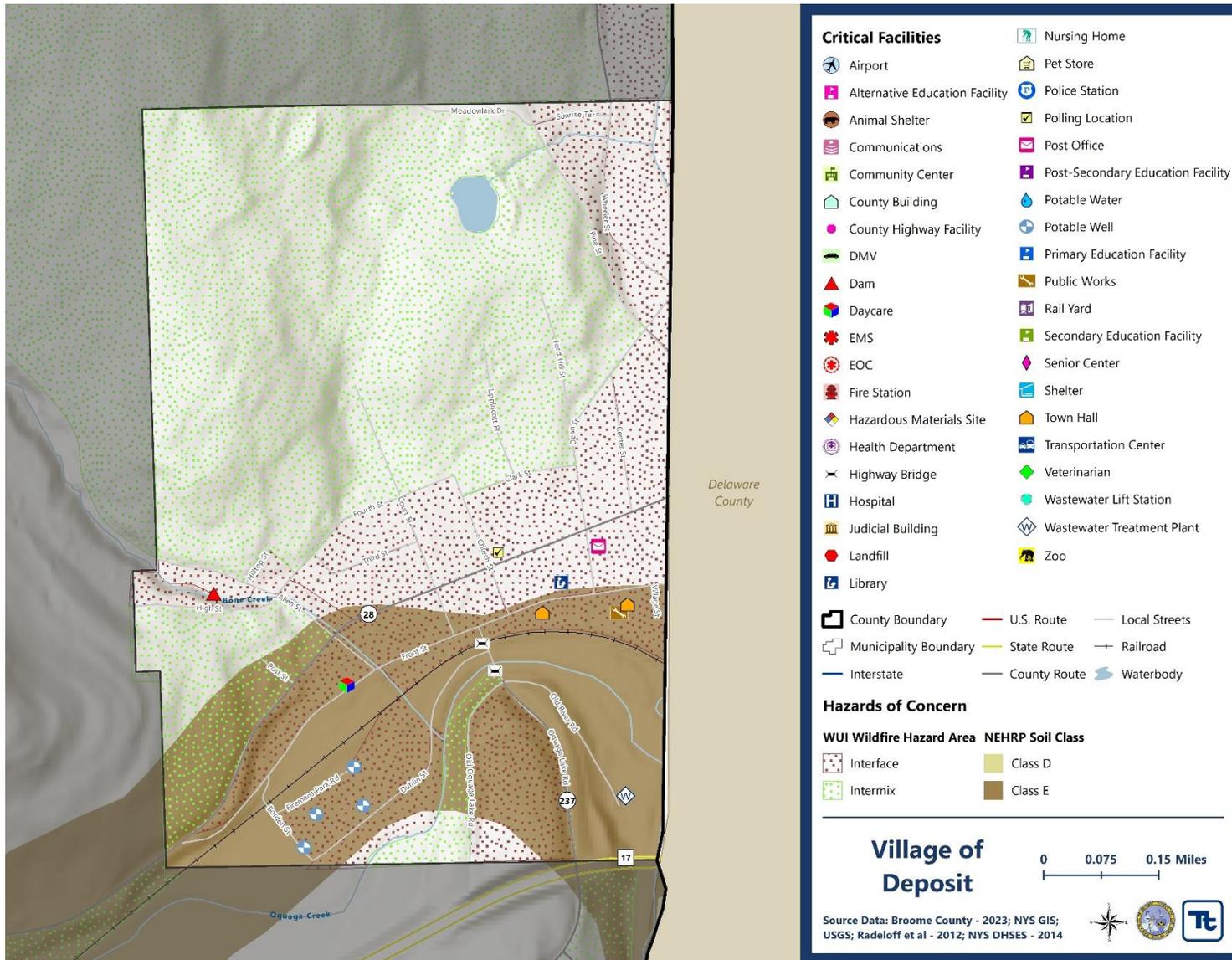




Figure 9.8-2. Village of Deposit Wildfire and NEHRP Soils Hazard Area Extent and Location





Hazard Event History

The history of natural and non-natural hazard events in the Village of Deposit is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.8-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.8-14. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Village adhered to masking and social distancing mandates.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Village of Deposit.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Deposit 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 Village indicated the rankings for the hazards of concern are appropriate.

Table 9.8-15 shows Deposit’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.8-15. Hazard Ranking

Hazard	Rank
Dam Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low





Hazard	Rank
Extreme Temperature	High
Flood	Medium
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.8-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.8-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Village of Deposit WWTP	Wastewater Treatment Plant	Yes	Yes	2024-DepositV-03	-
Well #1	Potable Well	Yes	Yes	2024-DepositV-03	-
Well #2	Potable Well	Yes	Yes	2024-DepositV-03	-
Well #4	Potable Well	Yes	Yes	2024-DepositV-03	-
Well #5	Potable Well	Yes	Yes	2024-DepositV-03	-
Town of Sanford Public Works	Public Works	Yes	Yes	2024-DepositV-03	-
Deposit Free Library	Library	Yes	Yes	2024-DepositV-03	-
Deposit Village Hall	Town Hall	Yes	Yes	2024-DepositV-03	-
Sanford Town Hall	Town Hall	Yes	Yes	2024-DepositV-03	-
Deposit Post Office	Post Office	Yes	Yes	2024-DepositV-03	-
Bridge_3349610	Highway Bridge	Yes	Yes	-	The bridge was built to withstand 0.2% flood.
Bridge_7702200	Highway Bridge	No	Yes	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

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

- Palmers Pond Dam
- Cannonsville Dam

Identified Issues

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





- The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.
- There are flood-prone roadways in the Village, including multiple roads which are located in the floodplain (Dublin Street, Old Oquaga Lake Road, Old River Road, Mill Street, Village Street, Front Street, 2nd Street, Center Street, Dean Street, among others outside of Broome County).
- The Village has potential impacts from two high-hazard potential dams (Palmer's Pond Dam and Cannonsville Dam). These structures have the potential to impact those living nearby.
- There are critical facilities in the Village which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
- There are repetitive loss properties in the Village. Repetitively flooded properties place undue stress on the property owner and Village and efforts should be made to mitigate them.
- The Village is not currently in the CRS program. The Village needs to identify whether joining the program will be beneficial to the community and its residents.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The Village does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.
- The Village currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about storm mitigation, preparation, response, and recovery.
- The Village is concerned about high water levels behind the Deposit Levee system, which borders Broome County and is located in the Delaware County portion of the Village, resulting in a breach.
- The Village Hall is a critical facility in the Village and has been identified as the location for the Village's Emergency Operations Center. The Village Hall does not have a backup/emergency generator, which would permit continuity of operations.
- The retaining wall along Oquaga Creek has deteriorated due to high water levels and repetitive flooding. This retaining wall currently protects the treatment plant and a sewer manhole.

*This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.

9.8.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.8-17 indicates progress on the Village'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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.8-17, the Village of Deposit did not identify any mitigation efforts completed since the last HMP.

DRAFT



Table 9.8-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
DepositV-01	2nd Street Stormwater Pipe Upgrade	Flood, Hurricane	Village Highway Department	<p>Problem: Second Street experiences a significant amount of flooding due to a 30" drain line that connects down into an 18" drain line for one block in the vicinity of Church Street to Dean Street. The mismatch causes a severe drainage bottleneck. Survey work has already been completed and a 30" stub pipe is ready. The affected area is technically within the jurisdiction of Broome County.</p> <p>Solution: Reduce the risk of flooding and injury by removing the 18" existing drain line and replacing it with a new 30" pipe for approximately 1 block.</p>	<ol style="list-style-type: none"> 1. Complete 2. Broome County completed this project. 	<ol style="list-style-type: none"> 1. Discontinue 2. Not applicable 3. Broome County completed this project.
DepositV-02	Tree Limbing Coordination Program	Wind, Hurricane, Snow Storm, Ice Storm	Village Highway Department	<p>Problem: Trees are vulnerable to high winds and the weight of snow and ice accumulations. Hazards may impact trees by causing branches and limbs to break, potentially causing damages and losses to people and property. Impacted trees may also cause power outages when branches, limbs, or full trees fall on utility lines.</p> <p>Solution: To reduce power outages due to downed trees from wind, ice, and snow storms, the Village of Deposit will create a vegetation maintenance program to coordinate with local utility companies to prioritize tree limbing along higher-risk utility corridors and utility maintenance work, as needed, with local DPW crews, and/or local contractors, if needed.</p>	<ol style="list-style-type: none"> 1. Complete 2. The Village created a vegetation maintenance program with the Village's tree company to perform maintenance on trees prior to storms and on an ongoing basis. 	<ol style="list-style-type: none"> 1. Discontinue 2. Not applicable 3. The Village created a vegetation maintenance program with the Village's tree company to perform maintenance on trees prior to storms and on an ongoing basis.



Proposed Hazard Mitigation Initiatives for the HMP Update

Deposit participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Deposit 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 the Village’s priorities.

Table 9.8-18 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. Table 9.8-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.8-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	X			X	X	X	X			X
Disease Outbreak				X			X			
Drought	X			X			X			X
Earthquake	X			X			X			X
Extreme Temperature	X			X			X			X
Flood	X	X		X	X	X	X		X	X
Invasive Species				X			X			
Severe Weather	X			X	X	X	X			X
Severe Winter Weather	X			X			X			X
Wildfire	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 stormwater 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.

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Table 9.8-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Community Objectives	Total	High / Medium / Low
2024-DepositV-01	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-DepositV-02	Flood Prone Roadways	0	1	1	1	1	0	1	0	1	0	1	1	0	1	9	Medium
2024-DepositV-03	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2024-DepositV-04	Critical Facilities in the Floodplain	1	1	1	1	1	0	0	1	1	0	1	1	1	0	10	Medium
2024-DepositV-05	Repetitive and Severe Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
2024-DepositV-06	Community Rating System (CRS) Program	0	1	1	1	1	1	0	1	1	0	1	1	0	1	10	Medium
2024-DepositV-07	Disaster Debris Management Plan	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High
2024-DepositV-08	Public Education and Outreach	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-DepositV-09	Deposit Levee System Flood Mitigation Study	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2024-DepositV-10	Village Hall Back-Up Generator	1	1	1	1	1	0	0	1	1	1	1	1	1	0	11	High
2024-DepositV-11	Oquaga Creek Retaining Wall	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High

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



Action 2024-DepositV-01. Socially Vulnerable Populations Outreach

Action Name:	2024-DepositV-01. Socially Vulnerable Populations Outreach		
Description of the Problem:	The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Village will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website.		
Lead Agency:	Village Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Village Budget, HMGP		
Implementation Timeline:	Within 3 years		
Goals Met:	1, 2, 3		
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Village. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Village will become educated on hazards and risks. The Village will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Village's already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No action	Current methods remain the only ones used.
	Rely on state or federal resources.	Resources may be generalized and not specific to the risks in the Village.
	Use only a few methods for distribution.	Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.

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Action 2024-DepositV-02. Flood Prone Roadways

Action Name:	2024-DepositV-02. Flood Prone Roadways	
Description of the Problem:	There are flood-prone roadways in the Village, including multiple roads which are located in the floodplain (Dublin Street, Old Oquaga Lake Road, Old River Road, Mill Street, Village Street, Front Street, 2nd Street, Center Street, Dean Street, among others outside of Broome County).	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will develop specific mitigation solutions for flood-prone road systems (roads, bridges, intersections, drainage, etc.) under the leadership of County Public Works.	
Lead Agency:	Village Public Works	
Supporting Agencies:	County Public Works	
Estimated Cost:	Medium	
Potential Funding Sources:	FEMA BRIC, HMGP, Village Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.	
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 of Capabilities:	Not applicable	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	
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.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
Alternatives	Action	
	Evaluation	
	No action	Current problem continues
Relocate all flood-prone road systems.	Not feasible	



	Raise all flood-prone roads.	Cost prohibitive
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Action 2024-DepositV-03. Dam Owner Partnership

Action Name:	2024-DepositV-03. Dam Owner Partnership		
Description of the Problem:	The Village has potential impacts from two high-hazard potential dams (Palmer's Pond Dam and Cannonsville Dam). These structures have the potential to impact those living nearby.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Work with the owners of the dams to ensure inspections and safety procedures are up to date. Identify mitigation actions to ensure the integrity of the dams and that it is protected up to the 0.2-percent flood hazard area.		
Lead Agency:	Village Administration		
Supporting Agencies:	Dam Owners, NYSDEC		
Estimated Cost:	Low		
Potential Funding Sources:	Village Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 3, 4, 5		
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.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
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 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.		
Impact of Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.		
Impact on Future Development:	Not applicable		
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. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		The village will be unaware of any safety concerns for the dam or its condition.
	Utilize information from NYSDEC.		Owners may not be required to submit a safety plan to the State.





	Utilize information from the National Inventory of Dams.	Not all dams are listed on the inventory.
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Action 2024-DepositV-04. Critical Facilities in the Floodplain

Action Name:	2024-DepositV-04. Critical Facilities in the Floodplain	
Description of the Problem:	There are critical facilities in the Village which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Coordinate with the facility managers at the Village Wastewater Treatment Plant, Library, Post Office, and Town Hall; Wells 1, 2, 4, and 5; and the Town of Sanford Public Works and Town Hall to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify the most cost-effective mitigation option. Phase 2: Work with the facility manager to implement selected action based on available funding and local match ability.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Village Administration, Facility Managers	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Village Budget, Private Owners	
Implementation Timeline:	5 years	
Goals Met:	1, 3, 5	
Benefits:	This action will remove or reduce critical facility and community lifeline vulnerability to flood hazards and remove or reduce safety risks for first responders.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.	
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	
Impact of Capabilities:	This action will enhance the Village’s current NFIP capabilities.	
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	





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. As sea level rises due to climate change, the area of the flood hazard may expand.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem continues
	Floodproof existing structures		May not necessarily reduce the risk
	Construct floodwalls to stop flood issues		Will most likely interrupt natural floodplain function

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Action 2024-DepositV-05. Repetitive and Severe Repetitive Loss Properties

Action Name:	2024-DepositV-05. Repetitive and Severe Repetitive Loss Properties	
Description of the Problem:	There are repetitive loss properties in the Village. Repetitively flooded properties place undue stress on the property owner and Village and efforts should be made to mitigate them.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be funding, benefits versus cost, and willing participation of property owners.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Broome County	
Estimated Cost:	Medium	
Potential Funding Sources:	FEMA FMA, FMA SWIFT, Village Budget, County Budget, Property Owners	
Implementation Timeline:	3 years	
Goals Met:	1, 5	
Benefits:	This action would foster comprehensive floodplain management by removing at-risk properties from the flood hazard area or elevating properties to reduce the flood risk.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.	
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	This action will enhance the Village’s current NFIP capabilities.	
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.	
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.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem continues



	Construct flood walls/barriers around vulnerable areas	Costly and can divert floodwaters to other areas
	Deployable flood barriers for vulnerable areas	Requires a great deal of work to implement prior to each event

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Action 2024-DepositV-06. Community Rating System (CRS) Program

Action Name:	2024-DepositV-06. Community Rating System (CRS) Program	
Description of the Problem:	The Village is not currently in the CRS program. The Village needs to identify whether joining the program will be beneficial to the community and its residents.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will evaluate the benefits and costs of participating in the CRS program. If feasible, the Village will join the program and begin implementing standards that exceed NFIP requirements.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Village Administrator	
Estimated Cost:	Low	
Potential Funding Sources:	Village Budget	
Implementation Timeline:	2 years	
Goals Met:	3, 5, 6	
Benefits:	The participation in the CRS benefits communities by offering discounted rates for flood insurance premiums, which addresses the three goals of the program: reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program, and foster comprehensive floodplain management.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	The participation in the Community Rating System (CRS) benefits communities by offering discounted rates for flood insurance premiums, which may be more affordable for some socially vulnerable populations.	
Impact on Critical Facilities/Lifelines:	Not applicable	
Impact of Capabilities:	This action would enhance the Village’s floodplain management capabilities.	
Impact on Future Development:	Future development would need to adhere to any increased standards established as part of joining the CRS program such as increased freeboard and elevation certificate requirements.	
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. These changes are likely to increase flood risks.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	The village will remain a non-participant.





	Adopt aspects of the CRS program into the floodplain management program	Increased floodplain management capabilities but no reduction in flood insurance premiums
	Abandon any floodplain management practices not required by NFIP	Reduction in floodplain management capabilities and increase in risk.

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Action 2024-DepositV-07. Disaster Debris Management Plan

Action Name:	2024-DepositV-07. Disaster Debris Management Plan		
Description of the Problem:	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The Village does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for the execution of the plan. The plan will align with permitted temporary collection areas.		
Lead Agency:	Village Public Works		
Supporting Agencies:	Village Emergency Management, Broome County		
Estimated Cost:	Staff time		
Potential Funding Sources:	Municipal budget		
Implementation Timeline:	Within 5 years		
Goals Met:	3, 4, 5, 6		
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Not applicable		
Impact of Capabilities:	The action will result in increased post-disaster capabilities.		
Impact on Critical Facilities/Lifelines:	Not applicable		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action	-
	Rely on federal cleanup.	These services may or may not be available.
	Rely on state cleanup.	These services may or may not be available.

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Action 2024-DepositV-08. Public Education and Outreach

Action Name:	2024-DepositV-08. Public Education and Outreach	
Description of the Problem:	The Village currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery regarding dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperature, floods, invasive and nuisance species, severe storms, severe winter storms, and wildfire utilizing a variety of outreach methods.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Village will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website.	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Village Budget	
Implementation Timeline:	1 year	
Goals Met:	1, 2, 3	
Benefits:	This action will improve the current public education and outreach program in the Village by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the Village.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the various hazards that may impact them in the Village.	
Impact on Critical Facilities/Lifelines:	Businesses, which may be considered critical facilities or lifelines, would be more informed on how to prepare for emergency events and mitigate the risks of potential hazards. With these businesses becoming more resilient, this action would contribute to their continuity of operations.	
Impact of Capabilities:	This action would build upon the Village's already existing public education and outreach program.	
Impact on Future Development:	Not applicable	
Climate Change Considerations:	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.	





Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Village.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.

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Action 2024-DepositV-09. Deposit Levee System Flood Mitigation Study

Action Name:	2024-DepositV-09. Deposit Levee System Flood Mitigation Study		
Description of the Problem:	The Village is concerned about high water levels behind the Deposit Levee system, which borders Broome County and is located in the Delaware County portion of the Village, resulting in a breach.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Engineers from Broome County and Delaware County will conduct a study on flood mitigation methods surrounding the Deposit Levee system. Consider actions such as elevating or reinforcing the levee. Once identified, implement the flood mitigation measure(s).		
Lead Agency:	Village Board		
Supporting Agencies:	Broome County Engineering, Delaware County Engineering		
Estimated Cost:	High		
Potential Funding Sources:	FEMA BRIC, HMGP, Broome County funding, Delaware County funding		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 5		
Benefits:	This action will result in the identification of a flood mitigation measure to reduce the flood risk to the structures near the Deposit Levee system.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will protect the vulnerable populations residing downstream from the Deposit Levee system by identifying and implementing the identified flood mitigation measure(s).		
Impact on Critical Facilities/Lifelines:	This action will strengthen the integrity of the Deposit Levee system, a critical facility.		
Impact of Capabilities:	Not applicable		
Impact on Future Development:	This action will provide protection from the flood hazard to future development located downstream from the Deposit Levee system.		
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. These changes are likely to increase flood risks. This action seeks to reduce the risk of flood.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current problem remains
	Remove levee system		Populations become unprotected from the flood hazard.





	Tear down the levee system and build a new one	Cost prohibitive
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Action 2024-DepositV-10. Village Hall Back-Up Generator

Action Name:	2024-DepositV-10. Village Hall Back-Up Generator		
Description of the Problem:	The Village Hall is a critical facility in the Village and has been identified as the location for the Village’s Emergency Operations Center which is used to respond to any potential hazard events, including dam and levee failure, earthquakes, extreme temperature, flood, severe storm, severe winter storm and wildfires which all have the ability to compromise the Village’s access to power. The Village Hall does not have a backup/emergency generator, which is needed to permit continuity of operations.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	Public Works will oversee the installation of a fixed-mounted diesel-powered generator and necessary electrical components to supply backup power to the Village Hall. Public Works will be responsible for the maintenance and testing of the generator following installation.		
Lead Agency:	Public Works		
Supporting Agencies:	Village Board, Engineering		
Estimated Cost:	Approximately \$60,000		
Potential Funding Sources:	HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Annual Budget		
Implementation Timeline:	Within 2 years		
Goals Met:	1, 5		
Benefits:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No action	Current problem remains
	Microgrid	Costly and difficult to implement.
	Solar panels and battery backup	Solar power is unlikely to be able to provide battery power for extended power failure events.

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Action 2024-DepositV-11. Oquaga Creek Retaining Wall

Action Name:	2024-DepositV-11. Oquaga Creek Retaining Wall	
Description of the Problem:	The retaining wall along Oquaga Creek has deteriorated due to high water levels and repetitive flooding. This retaining wall currently protects the treatment plant and a sewer manhole.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village's Public Works will lead the initiative to remove the existing retaining wall and rebuild the wall with a better foundation. During this project, the sewer manhole will be fortified with riprap to protect the piece of infrastructure. Furthermore, upstream a hook-up system will be installed.	
Lead Agency:	Public Works	
Supporting Agencies:	Village Board, NYS DEC, Trout Unlimited, Friends of the Upper Delaware River	
Estimated Cost:	Estimated \$90,000	
Potential Funding Sources:	FEMA BRIC, HMGP, Village Budget	
Implementation Timeline:	Within 1 year	
Goals Met:	1, 5	
Benefits:	This action will protect critical facilities from the impacts of flooding by rebuilding a failing retaining wall.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will ensure all populations served by the treatment plant will continue to be supported.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions.	
Impact of Capabilities:	Not applicable	
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.	
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. These changes are likely to increase flood risks. This action seeks to reduce the risk of flood.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Current problem remains
	Remove and do not rebuild	Flood risk increases
	Remove and rebuild, but do not fortify the sewer manhole	Sewer manholes may still be subject to flood impacts





SECTION 9.

9.9 TOWN OF DICKINSON

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Town of Dickinson with reducing losses from future hazard events. This annex is not guidance on 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 Town of Dickinson, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.9.1 Hazard Mitigation Planning Team

The Town of Dickinson identified primary and alternate HMP points of contact and developed this plan over several months, with input from many Town departments. The Engineer represented the community on the Broome County HMP Planning Partnership and 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 0-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 0-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Michael Marinaccio Address:531 Old Front Street. Binghamton, NY 13905 Phone Number: 607-723-9401 Email:mmarancio@townofdickinson.com	Name/Title: Ronald Lake Address:282 Ostrum Road, Kirkwood, NY 13795 Phone Number:607-343-8937 Email:ronbert18@stny.rrr.com
NFIP Floodplain Administrator	
Name/Title: Kyle Doyle Address: 531 Old Front Street. Binghamton, NY 13905 Phone Number: 607-723-9401 Email:kdoyle@townofdickinson.com	
Additional Contributors	
Name/Title: Ronald Lake, Engineer Method of Participation: Steering Committee KO Meeting, Steering Committee Meeting #2, Planning Partnership KO Meeting	
Name/Title: Kyle Doyle, Building Department/Code Enforcement Method of Participation: Planning Partnership KO Meeting	



9.9.2 Municipal Profile

The Town of Dickinson is located in the central part of Broome County, NY. The town is divided by the Chenango River. The Village of Port Dickinson is located within the Town of Dickinson on the east bank of the Chenango River (Tetra Tech 2019). For more information on the Village of Port Dickinson, refer to Section 9.18.

The Town of Dickinson has a total area of 4.9 square miles. The town is bounded on the north by the Towns of Chenango and Fenton, to the east by Kirkwood, to the south by Binghamton, and to the west by the Town of Union. The town is divided by the Chenango River. Interstate 81 joins Interstate 88 by the north town line. U.S. Route 11 passes across the south part of the town, turning north on the west side of the Chenango River. New York State Route 7 is a major north-south highway in the eastern part of Dickinson (Tetra Tech 2019).

Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Dickinson is governed by a Supervisor and four council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Dickinson was 3,401, a 6.5 percent decrease from the 2010 Census.

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 several 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 2021 U.S. Census American Community Survey indicates that 0.9 percent of the population is 5 years of age or younger, 24.4 percent is 65 years of age or older, 1.9 percent is non-English speaking, 10.1 percent is below the poverty threshold, and 18.0 percent is considered disabled.

9.9.3 Jurisdictional Capability Assessment and Integration

The Town of Dickinson 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Dickinson to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 0-2 summarizes the planning and regulatory tools that are available to the Town of Dickinson. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 0-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 265 of the municipal code, 2011	State and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town's Building Code provides protection from buildings in the flood hazard areas.				
Zoning/Land Use Code	Yes	Chapter 600 of the municipal code, 2009	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> <ul style="list-style-type: none"> The Zoning and Land Use Code prevents certain work in sensitive areas of the Town. 				
Subdivision Code	Yes	Chapter 490 of the municipal code, 2009	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Subdivisions Ordinance requires measures and reviews to prevent buildings that would impair flood hazard areas.				
Site Plan Code	Yes	Chapter 600 of the municipal code	Local and County	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Site Plan Ordinance requires measures and reviews to prevent buildings that would impair flood hazard areas.				
Stormwater Management Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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>				
Growth Management	Yes	Updating Comprehensive Plan	Local	Planning Board





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Growth Management element within the updated Comprehensive Plan will regulate and promote sustainable residential growth.				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Chapter 299 of the municipal code, 2009	Federal, State, County, and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> NA				
Other: Freeboard	Yes	Chapter 299 of the municipal code, 2009	Local	Highway
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Town's Freeboard prevents damage to structures and other property.				
Other: Cumulative Substantial Damages	Yes	Under development	Local	Highway
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Cumulative Substantial Damages Ordinance is currently underway by the Highway Department. This ordinance provides records to show where projects are needed.				
Other: Municipal Separate Storm Sewer System (MS4)	Yes	EPA & DEC Mandate	DEC, Local	Engineering
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The MS4 reduces the risk of contamination in the Town.				
Planning Documents				
General/Comprehensive Plan	Yes	Last update 2004. 19 – currently being updated	Local	Planning Board Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<ul style="list-style-type: none"> The Comprehensive Plan indicates the goals and protection for areas within the Town. 				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	Yes	470-09 Stormwater Management Plan, 2009	Local	Code/Engineer Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Stormwater Management Plan works to eliminate the problem areas.				
Open Space Plan	Yes	490-18 Open Space Plan, 2018	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Open Space Plan is responsible for controlling buildings and giving green areas to adsorb runoff.				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan	Local or County	Town Board





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The CEMP provides a command center and equipment for emergencies.				
Continuity of Operations Plan	Yes	Emergency Operation Plan	Local or County	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The EOP is the Towns CEMP which provides for a command center and equipment during emergencies.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 0-3 summarizes the capabilities of the Town of Dickinson to oversee and track development.

Table 0-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Depends on the development but could include code, planning, engineering, and town board.
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	The number of building permits for new construction is tracked.
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	There are a limited number of areas for development.

Administrative and Technical Capability

Table 0-4 summarizes potential staff and personnel resources available to the Town of Dickinson and their current responsibilities that contribute to hazard mitigation.





Table 0-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Chairman and board review with code recommendations
Zoning Board of Adjustment	Yes	Chairman and board review with strict guidelines
Planning Department	Yes	The Town Planning Department
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The commissioner and staff provide maintenance and support
Construction/Building/Code Enforcement Department	Yes	CEO issues permits and violation notices.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department is responsible for the maintenance and upkeep of public roads and streets.
Mutual aid agreements	Yes	County & other municipalities have mutual aid agreements.
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other: NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement Officer – Kyle Doyle
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	The Town Supervisor is responsible for the coordination of operations between the departments and offices.
Engineers or professionals trained in building or infrastructure construction practices	Yes	The Town Supervisor is responsible for the coordination of operations between the departments and offices.
Planners or engineers with an understanding of natural hazards	Yes	The Town Supervisor is responsible for the coordination of operations between the departments and offices.
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments.	Yes	The Town Engineer is responsible for reviewing official documents, plans, and permits.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	The Town Supervisor is responsible for the coordination of operations between the departments and offices.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Grant writer(s)	No	<i>Consider the following:</i> Are data and maps from the HMP used to support documentation in grant applications?
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

Table 0-5 summarizes financial resources available to the Town of Dickinson.

Table 0-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds.	Yes
Incur debt through special tax bonds.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 0-6 summarizes the education and outreach resources available to the Town of Dickinson.

Table 0-6. 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	Bookkeeper develops and maintains the Town’s website.
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-



Outreach Resources	Available? (Yes/No)	Comment:
Does the jurisdiction have any public outreach mechanisms/programs in place to inform citizens about natural hazards, risks, and ways to protect themselves during such events? <ul style="list-style-type: none"> If yes, please describe. 	No	-

Community Classifications

Table 0-7 summarizes classifications for community programs available to the Town of Dickinson.

Table 0-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 0-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 0-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate





Hazard	Adaptive Capacity - Strong/Moderate/Weak
Severe Winter Weather	Moderate
Wildfire	Moderate

9.9.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 0-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 0-9 summarizes the NFIP statistics for the Town of Dickinson.

Table 0-9. Town of Dickinson NFIP Summary of Policy and Claim Statistics

# Policies	0
# Claims (Losses)	0
Total Loss Payments	\$0
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 0-10 provides a summary of the NFIP program in the Town of Dickinson.

Table 0-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Low-lying areas in the Town are subject to repeated flood exposure.
Do you maintain a list of properties that have been damaged by flooding?	No, the Town does not maintain a list of properties that have been damaged by flooding.
Do you maintain a list of property owners interested in flood mitigation?	Yes, the Town would like to maintain a list.





NFIP Topic	Comments
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	No homeowners or business owners are interested in mitigation at this time.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No, there are no projects currently underway in the Town.
How do you make Substantial Damage determinations?	The Town utilizes the FEMA Guidelines to make determinations.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	There have been no declarations for recent flood events in the Town.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	There are no mitigated properties within the Town at this time.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes, the flood maps adequately address flood risk within the Town.
NFIP Compliance	
What local department is responsible for floodplain management?	The Code Enforcement Office is responsible for floodplain management within the Town.
Are any certified floodplain managers on staff in your jurisdiction?	No, there are no certified floodplain managers on staff within the Town.
Do you have access to resources to determine possible future flooding conditions from climate change?	No, the Town does not have access to these resources at this time.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No, the Town staff does not require assistance for floodplain management.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	All services are provided by the Town: permit review, GIS, education/outreach, inspections, engineering capability, etc.
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	The Town weighs the cost of improvement vs. the assessed value to determine qualification.
What are the barriers to running an effective NFIP program in the community, if any?	The Town currently does not experience any challenges with the NFIP program.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No, the Town does not have any NFIP compliance violations.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	The Town is unsure of the most recent CAV or CAC at this time.
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 299, 2009. Stormwater Management Plan Chapter 476, 2009, Erosion Control
What is the date that your flood damage prevention ordinance was last amended?	2009
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Yes, the Town's floodplain management program meets the minimum requirements.



NFIP Topic	Comments
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, the Town has a site plan review and the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Town is undecided at this time.

9.9.5 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 0-11 through Table 0-13.

Table 0-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2020				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0
2021				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)
 * Only location-specific hazard zones or vulnerabilities are identified.

Table 0-12. Recent Major Development and Infrastructure from 2018 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
None Identified					





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

Table 0-13. 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
None Anticipated					

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

9.9.6 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 Town of Dickinson’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 0-1 through Figure 0-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Dickinson has significant exposure.





Figure 0-1. Town of Dickinson Flood Hazard Area Extent and Location Map

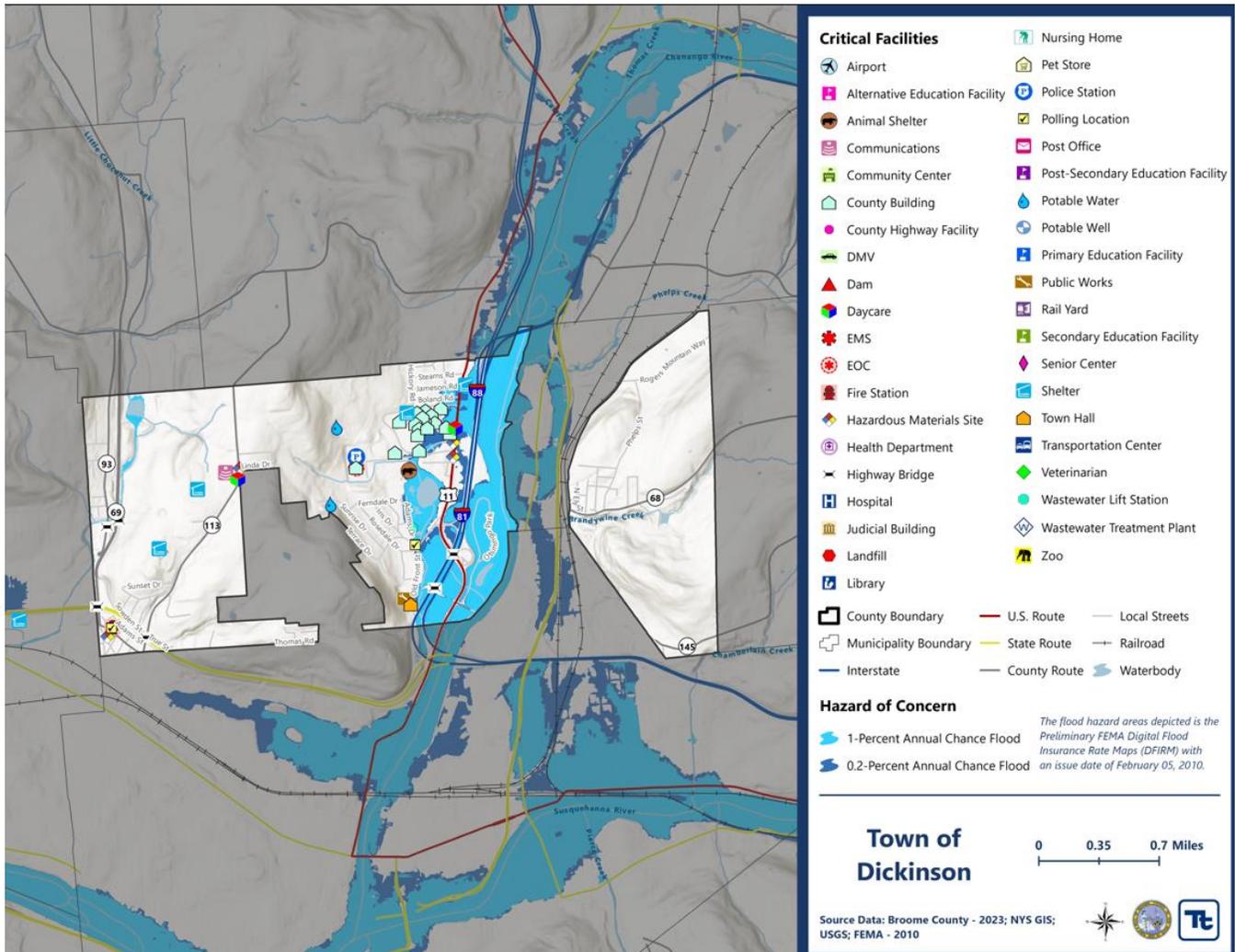
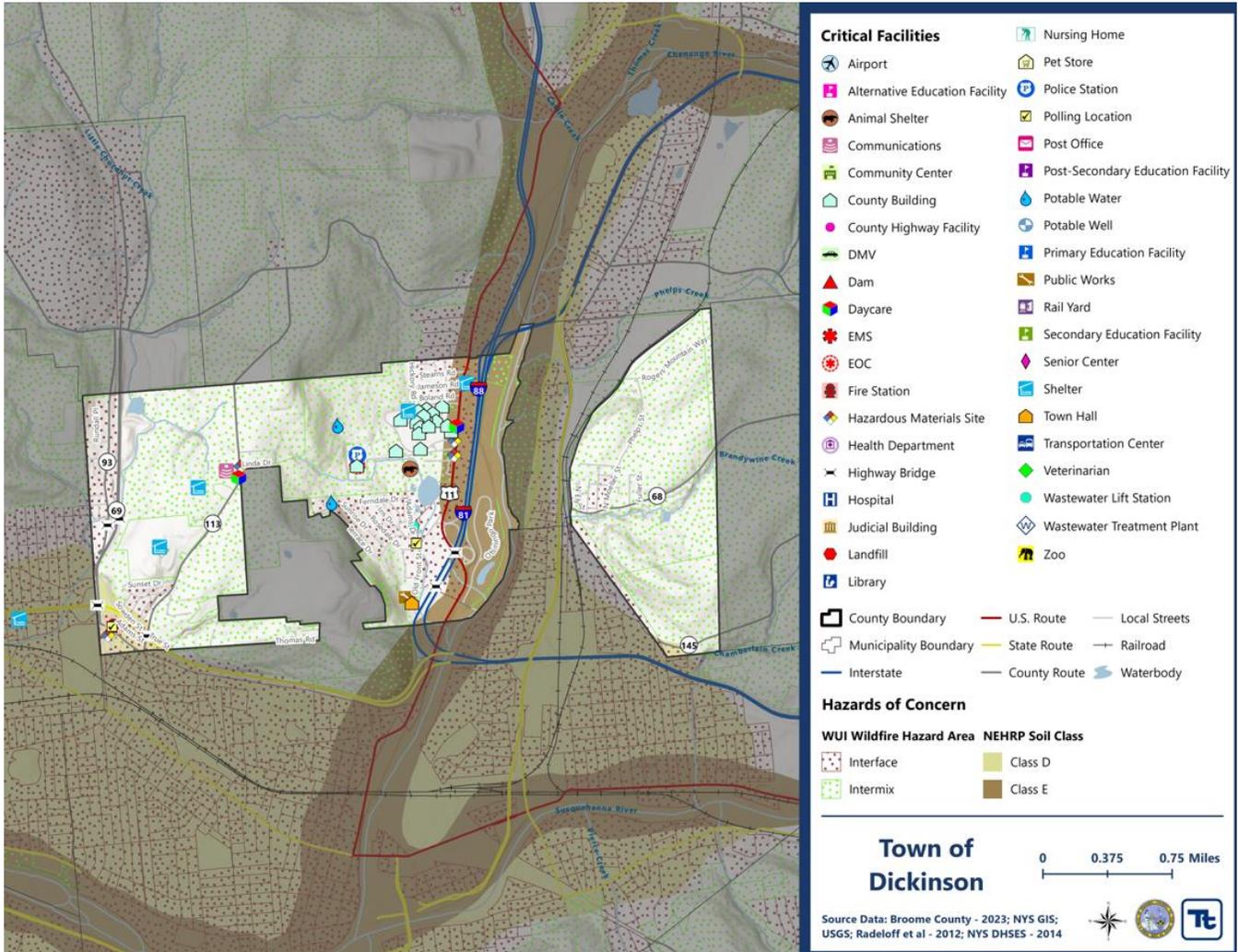




Figure 0-2. Town of Dickinson NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Dickinson is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 0-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 0-14. Hazard Event History in the Town of Dickinson

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	The Town did not experience any direct damages or losses from this hazard event.
January 20, 2020 – May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town Was subject to closures and social distancing/masking requirements.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Town did not experience any direct damages or losses from this hazard event.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	The Town did not experience any direct damages or losses from this hazard event.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Dickinson.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Dickinson 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 Town indicated the following:

- The hazard ranking identified in Table 9.1-15 and developed during the hazard ranking meeting is true.

Table 0-15 shows Dickinson’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 0-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

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 0-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 0-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Sunrise Terrace Pump Station	Wastewater Lift Station	Yes	Yes	2024-DickinsonT-3	-
Bridge_1008190	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1031190	Highway Bridge	Yes	Yes	-	The bridge was constructed to the





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
					500-year flood level.
Broome County Dog Shelter	Animal Shelter	No	Yes	2024-DickinsonT-3	-
BCC	County Building	No	Yes	2024-DickinsonT-3	-
Child Care Center	Daycare	No	Yes	2024-DickinsonT-05	-
Sunrise Terrace Community Center	Polling Location	No	Yes	2024-DickinsonT-3	-
Nimmonsburg United Methodist Church	Shelter	No	Yes	2024-DickinsonT-05	-

Source: Broome County, 2023

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

- Brandywine Creek Site 1 Dam located in Chenango River.
- Finch Hollow Site 1 Dam located in Johnson City.
- Little Choconut Site 2c Dam located in West Chenango.
- Little Choconut Site 2e Dam Located in West Chenango.
- Finch Hollow Site 2 Dam located in Johnson City.

Identified Issues

After review of the Town of Dickinson’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Dickinson identified the following vulnerabilities within their community:

- The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery regarding dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperature, floods, invasive and nuisance species, severe storms, severe winter storms, and wildfire utilizing a variety of outreach methods.
- The Broome Community College is prone to flooding.
- The pipes are undersized at the college pumping station and prone to failure.
- The following municipal-owned critical facilities are located in the floodplain:
 - Sunrise Terrace Pump Station
 - Broome County Dog Shelter
 - BCC-County Building
 - Sunrise Terrace Community Center
- The FDPO is out of date and needs to be updated to reflect current BFE NFIP standards.
- The following publicly owned critical facilities are located in the floodplain:





- Child Care Center
- Nimmonsburg United Methodist Church
- The following High Hazard Dams are in the Town of Dickinson, or in neighboring jurisdictions:
 - Brandywine Creek Site 1
 - Finch Hollow Site 1
 - Little Choconut Site 2c
 - Little Choconut Site 2e
 - Finch Hollow Site 2

9.9.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 0-17 indicates progress on the Town’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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 0-17, the Town of Dickinson identified the following mitigation efforts completed since the last HMP:

- None

Since the adoption of the County’s first HMP, the Town of Dickinson has made significant mitigation progress in the following areas:

- Stormwater Management
- Feasibility Studies
- Public Outreach and Training



Table 0-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Dickinson-1	Broome Community College Pump Station	Flood, Severe Storm	Town Engineer, Public Works, Superintendent	The pump station located near Broome Community College, serves the jail, businesses, and residential areas. During flood it backs up, puts in additional holding, builds adjacent, tears down the first one negotiates with the county. Engineering design, plans, specs for construction, water and sewer rates.	1. No progress 2. Threat Assessment has changed since DOT put in flood gate at Otsiningo Park. The town needs to re-evaluate the scope and change the scope of work that needs to be done.	1. Include in the 2024 HMP. 2. The Town will re-evaluate the scope of work to explore adding a wall to protect the pump station. 3. N/A
T. Dickinson-2	College Pumping Station increased storage capacity.	Flood, Severe Storm	Town Engineer, Public Works, Superintendent	The Town of Dickinson will replace pipes to double the storage capacity of the College Pumping Station to prevent overflow.	1. Ongoing. 2. No challenges to date.	1. Include in the 2024 HMP. 2. N/A 3. The Town of Dickinson will replace pipes to double the storage capacity of the College Pumping Station and build a wall to help protect and prevent overflow.
T. Dickinson-3	Dickinson Repetitive Loss Properties	Flood, Severe Storm	Municipal FPA with support from property owner	Conduct an outreach program to the property owners, informing them of the various options there are to mitigate their property. If the owner chooses to mitigate, the town will work with them to develop a grant application to obtain funding to mitigate the property.	1. No progress. 2. No RL or SRL properties were recorded.	1. Discontinue. 2. N/A 3. According to the NFIP data, there are no RL or SRL properties to date that need mitigation.
T. Dickinson-4	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	Update the municipal flood damage prevention ordinance to include the new freeboard	1. In progress. 2. No challenges to date.	1. Include in the 2024 HMP. 2. Update the municipal flood damage prevention ordinance to include the new



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				requirement of 2 feet above the BFE for both residential and commercial construction.		freeboard requirement of 2 feet above the BFE for both residential and commercial construction. 3. N/A
T. Dickinson-5	Sunrise Terrace Pump Station	Flood, Severe Storm	Public Works Department and Town Engineer	Install a flood wall outside the perimeter of the fence containing the pump station and its supporting equipment.	1. In progress. 2. Challenges with funding availability. The Town is currently looking for funding to complete this project.	1. Include in the 2024 HMP. 2. Install a flood wall outside the perimeter of the fence containing the pump station and its supporting equipment. 3. N/A



Proposed Hazard Mitigation Initiatives for the HMP Update

Dickinson participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Dickinson 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 the Town’s priorities.

Table 0-18 **Error! Reference source not found.** 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. Table 0-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 0-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	X		X	X	X	X			X
Disease Outbreak				X			X			
Drought				X			X			
Earthquake				X			X			
Extreme Temperature				X			X			
Flood	X	X		X	X	X	X		X	X
Invasive and Nuisance Species				X			X			
Severe Storm	X	X		X	X	X	X		X	X
Severe Winter Storm				X			X			
Wildfire				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 stormwater 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 0-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-DickinsonT-01	Broome Community College Pump Station	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2024-DickinsonT-02	College Pumping Station	0	1	1	1	1	1	0	1	1	1	0	1	1	1	11	High
2024-DickinsonT-03	Municipal-Owned Critical Facilities in the Floodplain	1	1	1	1	1	1	0	1	1	0	1	0	1	1	11	High
2024-DickinsonT-04	Update the NFIP Flood Damage Prevention Ordinance	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2024-DickinsonT-05	Privately Owned Critical Facilities in the Floodplain	1	1	1	1	1	1	0	1	1	0	1	0	1	1	11	High
2024-DickinsonT-06	Outreach to High-Hazard Dam Facilities	1	1	1	1	1	1	1	1	0	0	1	1	1	1	12	High
2024-DickinsonT-07	Public Education and Outreach	1	1	0	1	1	1	0	1	1	1	1	1	1	1	12	High

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



Action 2024-DickinsonT-01. Broome Community College Pump Station

Action Name:	2024-DickinsonT-01 (prev. T. Dickinson-1)		
Description of the Problem:	The Broome Community College is prone to flooding.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will re-evaluate the scope of work to explore adding a wall to protect the pump station.		
Lead Agency:	The Town Engineer		
Supporting Agencies:	Broome Community College		
Estimated Cost:	Medium (\$10,000 > \$500,000)		
Potential Funding Sources:	HMGP, Municipal budget.		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	2		
Benefits:	Reduction in flood exposure to the pump station		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for the community college to deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	With a protected critical asset, the pump station is more likely to remain intact during flooding events.		
Impact of Capabilities:	Ensuring continuity of operations allows for a more rapid return to normalcy after a hazard event.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow operations to adapt and resume in a more efficient manner.		
Climate Change Considerations:	Consideration should be taken for increases in flooding frequency and severity.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Problem continues.





	Build a new pump station uphill.	Too expensive, not an option.
	Sandbags.	Requires deployment, temporary solution.



Action 2024-DickinsonT-02. College Pumping Station

Action Name:	2024-DickinsonT-02 (prev. T. Dickinson-2)		
Description of the Problem:	The pipes are undersized at the college pumping station and prone to failure.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town of Dickinson will replace pipes to double the storage capacity of the College Pumping Station and build a wall to help protect and prevent overflow.		
Lead Agency:	The Town Engineer		
Supporting Agencies:	Broome Community College		
Estimated Cost:	Medium (\$10,000 > \$500,000)		
Potential Funding Sources:	<i>HMGP, Municipal budget.</i>		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	2		
Benefits:	Reduction in flood exposure to the pump station		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for the college to deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	With a protected critical asset, the pump station is more likely to remain intact during flooding events.		
Impact of Capabilities:	Ensuring continuity of operations allows for a more rapid return to normalcy after a hazard event.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow operations to adapt and resume in a more efficient manner.		
Climate Change Considerations:	Consideration should be taken for increases in flooding frequency and severity.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Problem continues.
	Build a new pump station uphill.		Too expensive, not an option.





	Sandbags.	Requires deployment, temporary solution.
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Action 2024-DickinsonT-03. Municipal-Owned Critical Facilities in the Floodplain

Action Name:	2024-DickinsonT-03	
Description of the Problem:	<p>The following municipal-owned critical facilities are located in the floodplain:</p> <ul style="list-style-type: none"> - Sunrise Terrace Pump Station - Broome County Dog Shelter - BCC-County Building - Sunrise Terrace Community Center 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost-effective measures.	
Lead Agency:	Town, Department of Public Work	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	
Implementation Timeline:	Short (< 5 years).	
Goals Met:	1, 2	
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.	





Priority: <i>Check one</i> Alternatives	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
	Action		Evaluation
	Do nothing.		Problem persists.
	Rain gardens.		Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers.		Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2024-DickinsonT-04. Update the NFIP Flood Damage Prevention Ordinance

Action Name:	2024-DickinsonT-04 (prev. T. Dickinson-4)		
Description of the Problem:	The FDPO is out of date and needs to be updated to reflect current BFE NFIP standards.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Update the municipal flood damage prevention ordinance to include the new freeboard requirement of 2 feet above the BFE for both residential and commercial construction.		
Lead Agency:	Flood Administrator		
Supporting Agencies:	N/A		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	<i>Municipal budget</i>		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	3		
Benefits:	Future structures will be protected against flooding.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action will ensure that vulnerable populations are living in flood-protected structures.		
Impact on Critical Facilities/Lifelines:	Updating the FDPO will make sure that critical facilities and lifelines are protected against flood impacts.		
Impact of Capabilities:	This action will ensure standards of operation for emergency responders are maintained during a flood event by protecting critical structures needed to respond safely to community needs.		
Impact on Future Development:	This action will ensure that future development is safely protected from future flooding impacts.		
Climate Change Considerations:	Updating the FDPO takes into consideration climate change impacts on flooding frequency and severity.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Problem persists.
	Sandbags.		Short-term solutions still do not meet NFIP requirements.
	Require more than 2 feet above BFE.		Not publicly accepted, not feasible.





Action 2024-DickinsonT-05. Privately Owned Critical Facilities in the Floodplain

Action Name:	2024-DickinsonT-05		
Description of the Problem:	The following publicly owned critical facilities are located in the floodplain: <ul style="list-style-type: none"> - Child Care Center - Nimmonsburg United Methodist Church 		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town Department of Public Works will conduct public outreach to property owners on flood mitigation and funding opportunities.		
Lead Agency:	Town, Department of Public Works		
Supporting Agencies:	N/A		
Estimated Cost:	Low		
Potential Funding Sources:	Municipal Budget		
Implementation Timeline:	Short (< 5 years).		
Goals Met:	1, 2		
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in better-informed facility managers of critical facilities that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	Do nothing.	Critical facilities are inoperable during flood events.
	Rain gardens.	Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers.	Requires deployment, short-term solution.



Action 2024-DickinsonT-06. Outreach to High-Hazard Dam Facilities

Action Name:	2024-DickinsonT-06	
Description of the Problem:	<p>The following High Hazard Dams are in the Town of Dickinson or neighboring jurisdictions:</p> <ul style="list-style-type: none"> • Brandywide Creek Site 1 • Finch Hollow Site 1 • Little Choconut Site 2c • Little Choconut Site 2e • Finch Hollow Site 2 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will conduct outreach to inform owners of the high-hazard dams of risk and possible mitigation actions to protect against dam failure.	
Lead Agency:	Town Department of Public Works	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	High-hazard dam owners will be better educated on the risk of dam failure and be aware of possible mitigation actions to pursue.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Outreach to high-hazard dam owners will reduce flood risk to the community, by promoting mitigation actions to protect against dam failure.	
Impact on Critical Facilities/Lifelines:	This action will promote education and resources for safe and operable dams near the Town, which are a critical facility.	
Impact of Capabilities:	This action will ensure the most current data and resources are available for high-hazard dam owners in and around the Town.	
Impact on Future Development:	This action will protect future development in and around the high-hazard dams.	
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for high-hazard dam owners.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	Do nothing.	Problem persists.	
	Remove dams.	Not an option, costly.	
	Relocate residents.	Not an option, costly.	



Action 2024-DickinsonT-07. Public Education and Outreach

Action Name:	2024-DickinsonT-07	
Description of the Problem:	The Town currently does not have a comprehensive education and outreach program. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery regarding dam and levee failure, disease outbreaks, drought, earthquakes, extreme temperature, floods, invasive and nuisance species, severe storms, severe winter storms, and wildfire utilizing a variety of outreach methods.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.	
Lead Agency:	Town Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low (< \$10,000)	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	1 year	
Goals Met:	1,2,3	
Benefits:	This action will improve the current public education and outreach program in the Town by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the Town.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	
Impact on Critical Facilities/Lifelines:	Businesses, which may be considered critical facilities or lifelines, would be more informed on how to prepare for emergency events and	





	mitigate the risks of potential hazards. With these businesses becoming more resilient, this action would contribute to their continuity of operations. 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.		
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.



SECTION 9.

9.10 VILLAGE OF ENDICOTT

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist the public and private sectors in the Village of Endicott with reducing losses from future hazard events. This annex is not guidance on 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 Village of Endicott, describes who participated in the planning process, assesses the Village’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.10.1 Hazard Mitigation Planning Team

The Village of Endicott identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Village departments. The Village Manager represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.10-1 Volume 1 summarizes Village officials who participated in the development of the annex and in what capacity. It also includes additional documentation of the Village’s planning activities through Planning Partnership Volume 1.

Table 9.10-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Anthony Bates, Village Manager Address: 1009 East Main Street, Endicott, NY 13760 Phone Number: 607-757-5337 Email: abates@endicottny.com	Name/Title: Cameron Williams, Engineering Tech Address: 1009 East Main Street, Endicott, NY 13760 Phone Number: 607-757-2425 Email: engineer2@endicottny.com
NFIP Floodplain Administrator	
Name/Title: Joseph Griswold Address: 224 Madison Avenue – Endicott, NY 13760 Phone Number: 607-757-2463 Email: jgriswold@co.broome.ny.us	
Additional Contributors	
Name/Title: Brian Botsford, Fire Marshal Method of Participation:	
Name/Title: Rob Kaczynski, Street Supervisor Method of Participation:	
Name/Title: Joe Griswold, Chief of Fire Department Method of Participation:	





Primary Point of Contact	Alternate Point of Contact
Name/Title: Nicholas Burlingame, Mayor Method of Participation:	
Name/Title: Janice Orlando, Deputy Clerk-Treasurer Method of Participation:	
Name/Title: Philip Grayson, Chief Operator, WWTP Method of Participation: The	

9.10.2 Municipal Profile

The Village of Endicott is located in the Town of Union in Broome County, NY. For more information on the Town of Union, refer to Section 9.21. The Village is part of the "Triple Cities," along with Binghamton to the Southeast, and Johnson City to the East. The Village is on the north side of the Susquehanna River and the New York State Route 17. The Village of Endicott is governed by a Mayor and four Trustees (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Village of Endicott was 13,667, a 2.1 percent increase from the 2010 Census.

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 2020 U.S. Census American Community Survey indicates that 4.9 percent of the population is 5 years of age or younger, 17.1 percent is 65 years of age or older, 0.8 percent is non-English speaking, 25.9 percent is below the poverty threshold, and 18.6 percent is considered disabled.

9.10.3 Jurisdictional Capability Assessment and Integration

The Village of Endicott 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their





progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Village of Endicott to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.10-2 summarizes the planning and regulatory tools that are available to the Village of Endicott. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.10-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 160, Housing Standards (7/10/2006); Building Code of New York State (2020)	State and Local	Local Codes Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Chapter 160 applies to premises within the Village, such as:</p> <ul style="list-style-type: none"> - Lots, plots, or parcels of land that are vacant or upon which buildings used for dwellings, mixed occupancy, commercial, industrial, or storage uses, whether occupied or vacant, are located. - Residential buildings, including private dwellings and multiple dwellings, unless specifically excluded. - Buildings of mixed occupancy, occupied in whole or in part. - Commercial, industrial, and storage buildings. - Vacant residential, mixed occupancy, commercial, industrial, and storage buildings. - Residential, mixed occupancy, commercial, industrial, and storage buildings that are under construction or demolition, including buildings not completed, to the extent that a nuisance or practice exists or is being carried out which is a disturbance to the public health, safety, or welfare. - Accessory structures, accessory to dwellings or commercial, industrial, or vacant buildings. <p>The NYS Building Code is intended to establish provisions that adequately protect public health, safety, and welfare through the minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The 2020 edition is an update to the 2018 edition published by the ICC. It is part of the Uniform Fire Prevention and Building Code.</p>				
Zoning/Land Use Code	Yes	Chapter 300, Zoning (11/22/2011)	Local	Local Codes Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Zoning Ordinance implements the goals and objectives of the 2008 Unified Comprehensive Plan, which include:</p> <ul style="list-style-type: none"> - Providing a wide variety of living environments for all socioeconomic groups in the population and a diversity of housing densities and types, ranging from rural low density to urban high density. - Providing a sound commercial base, offering convenience, choice, and a wide variety of goods and services. - Improving the economy by promoting new and expanded industrial enterprises, retaining existing enterprises, and redeveloping existing industrial facilities in order to further diversify the economic base and provide for increased employment on a permanent basis. - Providing a transportation network that is capable of moving people and goods efficiently and safely. - Maintaining the infrastructure at a level needed to continue adequate services to Town and Village residents. - Enriching the lives of all citizens by striving to improve the quality of the environment. - Accommodating solar energy systems, equipment, and access to sunlight. 				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Subdivision Code	Yes	Combined T. of Union and Endicott Ordinance, 1/1/12	Local	Local Codes Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Village does not have a subdivision ordinance in the Village Code. The Town does and if it came up the Village would refer it to the Town to take care of.</p>				
Site Plan Code	Yes	Chapter 300-63 Site Plan Review	Local and County	Village Planning & Zoning Boards
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The site plan review process intends to preserve and enhance the character of a neighborhood, achieve compatibility with adjacent development, mitigate potentially negative impacts on traffic, parking, drainage, and similar environmental concerns, improve the overall visual and aesthetic quality of the Town and Villages, and increase the capability of the Zoning Ordinance to adapt to a variety of unique circumstances.</p>				
Stormwater Management Code	Yes	Chapter 213 Stormwater Management and Erosion and Sediment Control (12/10/2007), Stormwater Control	Local	Village Engineer, Local Codes Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction. This chapter seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> - Meet the requirements of minimum measures 4 and 5 of the SPDES general permit for stormwater discharges from municipal separate stormwater sewer systems (MS4s), Permit No. GP-02-02, or as amended or revised. - Require land development activities to conform to the substantive requirements of the New York State Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) general permit for construction activities, GP-02-01, or as amended or revised. - Minimize increases in stormwater runoff from land development activities to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels. - Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality. - Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable. - Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety. 				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><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.</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	Yes	Chapter 129 Environmental Quality Review (10/23/1989); Chapter 129-8 Environmental Impact Statements	Local	Public Works Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Following a determination that a proposed action may have a significant effect on the environment, the Superintendent of Public Works shall, in accordance with the provisions of Part 617 of Title 6 of the New York Codes, Rules, and Regulations. (1) In the case of an action involving an applicant, immediately notify the applicant of the determination and request the applicant to prepare an environmental impact report in the form of a draft environmental impact statement. (2) In the case of an action not involving an applicant, prepare a draft environmental impact statement.				
Flood Damage Prevention Ordinance	Yes	Chapter 142, Flood Damage Prevention Ordinance, 9/285/1998	Federal, State, County, and Local	Local Codes Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of Chapter 142 to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ul style="list-style-type: none"> - Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities. - Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. - Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. - Control filling, grading, dredging, and other development which may increase erosion or flood damages. - Regulate the construction of flood barriers which will unnaturally divert floodwaters, or which may increase flood hazards to other lands. - Qualify for and maintain participation in the National Flood Insurance Program. 				
Wellhead Protection	Yes	Chapter 242 Wellhead, Aquifer Recharge and Watershed Protection Zones (1/26/1998)	Local	Aquifer Protection District
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose and intent of establishing the Wellhead, Aquifer Recharge, and Watershed Protection Zones described below are to minimize the potential for contamination of the aquifer which currently supplies or in the future may supply water to the residents of the Village of Endicott. In promoting the general intent of these regulations, the specific intent is: <ul style="list-style-type: none"> - To protect and maintain groundwater quality in the protection districts tributary to the wells that supply water to the residents of the Village of Endicott. - To protect the general health and safety of the residents of the Village of Endicott. 				
Emergency Management Ordinance	Yes	Chapter 18, Adoption of Emergency Management Plan	Local	Board of Trustees
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Board of Trustees does hereby adopt as official the Emergency Preparedness and Management Plan, under the date of May 1989, as the official emergency plan of the Village of Endicott.				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	NYS Residential Code (2010); R324.1.3.3 Freeboard	State, Local	Local Codes Office





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified. A freeboard shall not be required where it is not possible to obtain a design flood elevation from the FIRM or any method established above and the design flood elevation is three feet above the highest adjacent grade.				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Planning Documents				
General/Comprehensive Plan	Yes	Village of Endicott I District Master Plan,	Local	Village Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A community's master plan provides a long-range vision for the built environment, guides land use, identifies suitable locations for development, improves public spaces, implements strategies for economic development, protects historical, and natural resources, and mitigates traffic issues – all to improve quality of life.				
Capital Improvement Plan	Yes	Capital Improvements Plan	Local	Village Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Village uses funding from its budget and also applies for grant funding to support hazard mitigation projects to reduce potential flood risks.				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	Yes	Floodplain Management and Wetland Protection Plan (3/1/2016)	Local	DEC
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This Floodplain Management Plan meets the requirements of 24 CFR Part 55.20 and the Executive Order 11988—Floodplain Management—for the Village of Endicott Water Supply Interconnection Project (Project) in the Village of Endicott, Broome County, New York. This Floodplain Management Plan documents the eight-step decision-making for the Project and pertains to activities within the Special Flood Hazard Area (SFHA) as defined by the Federal Emergency Management Agency (FEMA), or its successors, pursuant to the National Flood Insurance Program (NFIP), or a successor program, whether advisory, preliminary, or final.				
Stormwater Management Plan	Yes	Storm Water Management Plan	Local	Village Engineer, Local Codes Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Village of Endicott is an MS4 Regulated Community and has a formal Stormwater Management Plan. The Plan specifies projects/actions/initiatives to reduce the volume of stormwater, or otherwise mitigate stormwater flooding.				
Open Space Plan	Yes	Open Space Plan, 1/1/2012	Local	Codes Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Open Space District is intended to protect the natural amenities in the district and restrict development in the district that does not respect environmentally sensitive areas.				
Urban Water Management Plan	Yes	Village of Endicott Wastewater Treatment Plan and Collection System Improvements Study	Local	Village Engineer, DPW
<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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
The Village of Endicott, in collaboration with the Towns of Union and Vestal, will complete an engineering report that will include a flow management plan, a schedule for inflow and infiltration reduction projects, and recommended measures for improving the wastewater treatment plant's hydraulic capacity and nutrient removal capability.				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	Yes	Economic Development Plan	Local	Village Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Economic Development Plan provides direction and strategies to promote economic growth for the Village.				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	Yes	Downtown Revitalization Initiative for Endicott (5/31/2016)	Local	REDC
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The purpose of this plan is to provide an overview of the downtown and summarize the rationale behind nominating this downtown for a Downtown Revitalization Initiative (DRI) award; detail the boundaries of the targeted neighborhood; describe how downtown will capitalize on prior and future, private/public investments; and more.				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Emergency Preparedness and Management Plan; NYS 2019 State Hazard Mitigation Plan (SHMP)	Local and State	Police and Fire
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
NYS (2019) - This portion of the CEMP addresses the State's overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA's five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operation Plan, (2/14/2008)	County	Police and Fire
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	Post-Disaster Recovery Plan; NYS Long-Term Recovery Plan (March 2023)	Local and state	Village Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following: <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and - provide an overview of the stakeholder planning group (SPG). 				
Other	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.10-3 summarizes the capabilities of the Village of Endicott to oversee and track development.

Table 9.10-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	We issue individual building permits out of the code office. Each permit is tracked individually.
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Permits are tracked by new construction by SFHA.
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	The Village’s level of build-out is almost 100%.

Administrative and Technical Capability

Table 9.10-4 summarizes potential staff and personnel resources available to the Village of Endicott and their current responsibilities that contribute to hazard mitigation.

Table 9.10-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Planning Board is responsible for: - reviewing and making recommendations regarding the following: <ul style="list-style-type: none"> (a) Amendments to the Zoning Map (rezoning); (b) Amendments to the text of this chapter; and (c) Applications for the creation of a Planned Unit Development District.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals has the following responsibilities: <ul style="list-style-type: none"> (a) Applications for variances; (b) Administrative appeals; (c) Applications for temporary use permits; and (d) Amendments to restrictions enacted by the ZBA
Planning Department	No	-
Mitigation Planning Committee	No	-





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	The Village Board is responsible for the Village property and finances.
Public Works/Highway Department	No	
Construction/Building/Code Enforcement Department	Yes	The Code Enforcement Office is staffed with nine full-time Code Enforcement Officials under the direction of the Fire Marshal. The Office is dedicated to enhancing the quality of life within the Village of Endicott through a cooperative effort between the Village, its businesses, and citizens. The CEO's mission is to attain compliance with the Code of the Village of Endicott and New York State Uniform Fire Prevention and Building Code and the maintenance of structures and premises through education, cooperation, enforcement, and abatement to achieve a cleaner, healthier, and safer community.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Village of Endicott Street Department is responsible for maintenance and updates to streets and roads.
Mutual aid agreements	Yes	County Wide Agreements.
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	The Village Engineer is responsible for approving plans and designs for the Village. The Fire Chief for the village has the responsibility to make Endicott a fire-safe Community and has served the community since 1912.
Engineers or professionals trained in building or infrastructure construction practices	Yes	The Village Engineer is responsible for approving plans and designs for the Village.
Planners or engineers with an understanding of natural hazards	Yes	The Village Engineer is responsible for approving plans and designs for the Village. The Fire Chief's mission is to make Endicott a fire-safe Community and has served the community since 1912.
Staff with expertise or training in benefit/cost analysis	Yes	The treasurer is responsible for Village funds.
Professionals trained in conducting damage assessments.	Yes	NY State The Code Enforcement Office is dedicated to enhancing the quality of life within the Village of Endicott through a cooperative effort between the Village, its businesses, and citizens. The CEO's mission is to attain compliance with the



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		Code of the Village of Endicott and New York State Uniform Fire Prevention and Building Code and the maintenance of structures and premises through education, cooperation, enforcement, and abatement to achieve a cleaner, healthier, and safer community.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	The Mission of the Endicott Police Department is to serve and protect fellow citizens by enforcing the law, preserving the peace, maintaining order, safeguarding the rights and dignity of all people, and continually striving to improve the quality of life in the community. The Fire Chief's mission is to make Endicott a fire-safe Community and has served the community since 1912.
Grant writer(s)	Yes	The Village Board is responsible for the Village property and finances. <i>Consider the following:</i> Are data and maps from the HMP used to support documentation in grant applications?
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

Table 9.10-5 summarizes financial resources available to the Village of Endicott.

Table 9.10-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes
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	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No





Education and Outreach Capability

Table 9.10-6 summarizes the education and outreach resources available to the Village of Endicott.

Table 9.10-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	The Village utilizes a social media consultant.
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Facebook is used for outreach.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	The Village uses a website and social media pages.
Natural disaster/safety programs in place for schools	Yes	The schools work with the Village police and fire departments.
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Does the jurisdiction have any public outreach mechanisms/programs in place to inform citizens about natural hazards, risks, and ways to protect themselves during such events? <ul style="list-style-type: none"> If yes, please describe. 	Yes	Village of Endicott Website, Social Media pages, Local News

Community Classifications

Table 9.10-7 summarizes classifications for community programs available to the Village of Endicott.

Table 9.10-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	ISO: Insurance Services Organization	2015
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	State and County	2016: Class 2
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other: Organizations with a mitigation focus (advocacy group, non-government)	Yes	Endicott Proud	2018

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.10-8 summarizes the adaptive capacity for each identified hazard of concern and the Village’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 9.10-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

9.10.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.10-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.10-9 summarizes the NFIP statistics for the Village of Endicott.

Table 9.10-9. Village of Endicott NFIP Summary of Policy and Claim Statistics

# Policies	53
# Claims (Losses)	85
Total Loss Payments	\$3,926,585
# Repetitive Loss Properties (NFIP definition)	8
# Repetitive Loss Properties (FMA definition)	2
# Severe Repetitive Loss Properties	3

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.10-10 provides a summary of the NFIP program in the Village of Endicott.

Table 9.10-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Low-lying areas within the Village are vulnerable to repeated flood exposure.
Do you maintain a list of properties that have been damaged by flooding?	The Village started to maintain a list after the 2011 Flooding.
Do you maintain a list of property owners interested in flood mitigation?	The Village does not have a list of homeowners interested in flood mitigation at this time.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	The Village does not have a list of homeowners interested in flood mitigation at this time.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	These are only planned at the county level.
How do you make Substantial Damage determinations?	Code Enforcement Office makes substantial damage determinations.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None were declared since the 2011 Flooding.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	None have been mitigated since the 2011 Flooding.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes, the flood hazard maps address the flood risk within the village.
NFIP Compliance	
What local department is responsible for floodplain management?	The Engineering Department is responsible for floodplain management.
Are any certified floodplain managers on staff in your jurisdiction?	There are no staff certified at this time.
Do you have access to resources to determine possible future flooding conditions from climate change?	The Village only has access to resources such as flood maps as they are updated.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	The village staff requires classes to get floodplain management certification.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Code Enforcement Office handles the permits and inspections.



NFIP Topic	Comments
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	Code Enforcement Office makes this determination.
What are the barriers to running an effective NFIP program in the community, if any?	Some challenges are high cost and low interest from residents.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	The village does not have any violations at this time.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	The Village is unsure of the most recent date for CAV or CAC at this time.
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 142 of the Village of Endicott Code Book, 2013.
What is the date that your flood damage prevention ordinance was last amended?	2013
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	The Floodplain Management Program meets the minimum requirements.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, the code department, planning board, and zoning board all review the plans of projects.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The village is undecided at this time.

9.10.5 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 9.10-11 through Table 9.10-13.

Table 9.10-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	0	0	1	1
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	1	1
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	1	1
Permits within SFHA	0	0	0	0





	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2022				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.10-12. Recent Major Development and Infrastructure from 2018 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
Evans Mechanical	Commercial	1	312 Maple St.	-	Complete
Byrne Dairy	Commercial	1	301 E. Main Street	-	Complete
Village of Endicott Pump House	Municipal	1	2100 Watson Blvd	-	Complete

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

Table 9.10-13. 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
None Anticipated					

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

9.10.6 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 Village of Endicott risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Village are shown in Figure 9.10-1 through Figure 9.10-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Endicott has significant exposure. The maps show the location of potential new development, where available.



Figure 9.10-1. Village of Endicott Flood Hazard Area Extent and Location Map

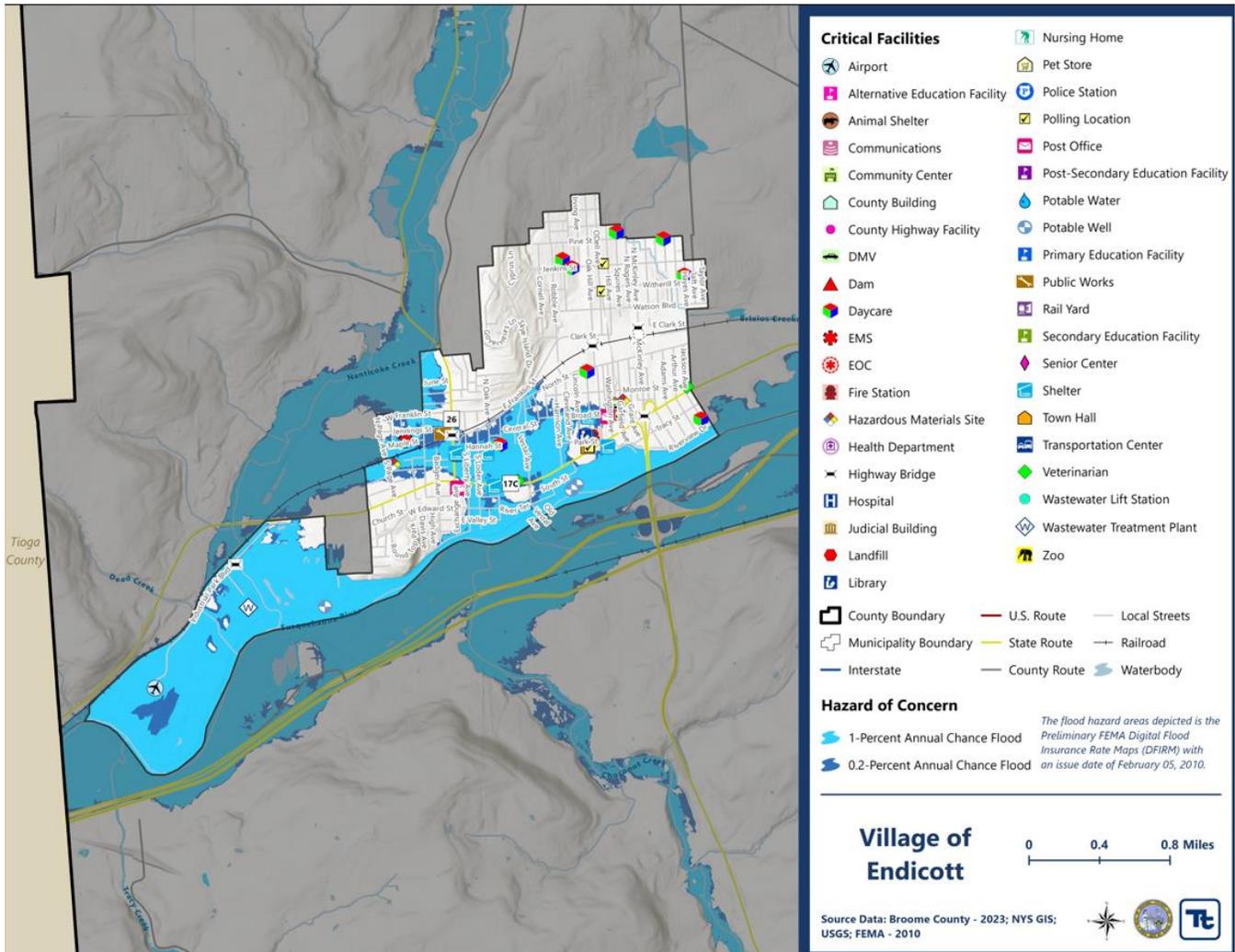
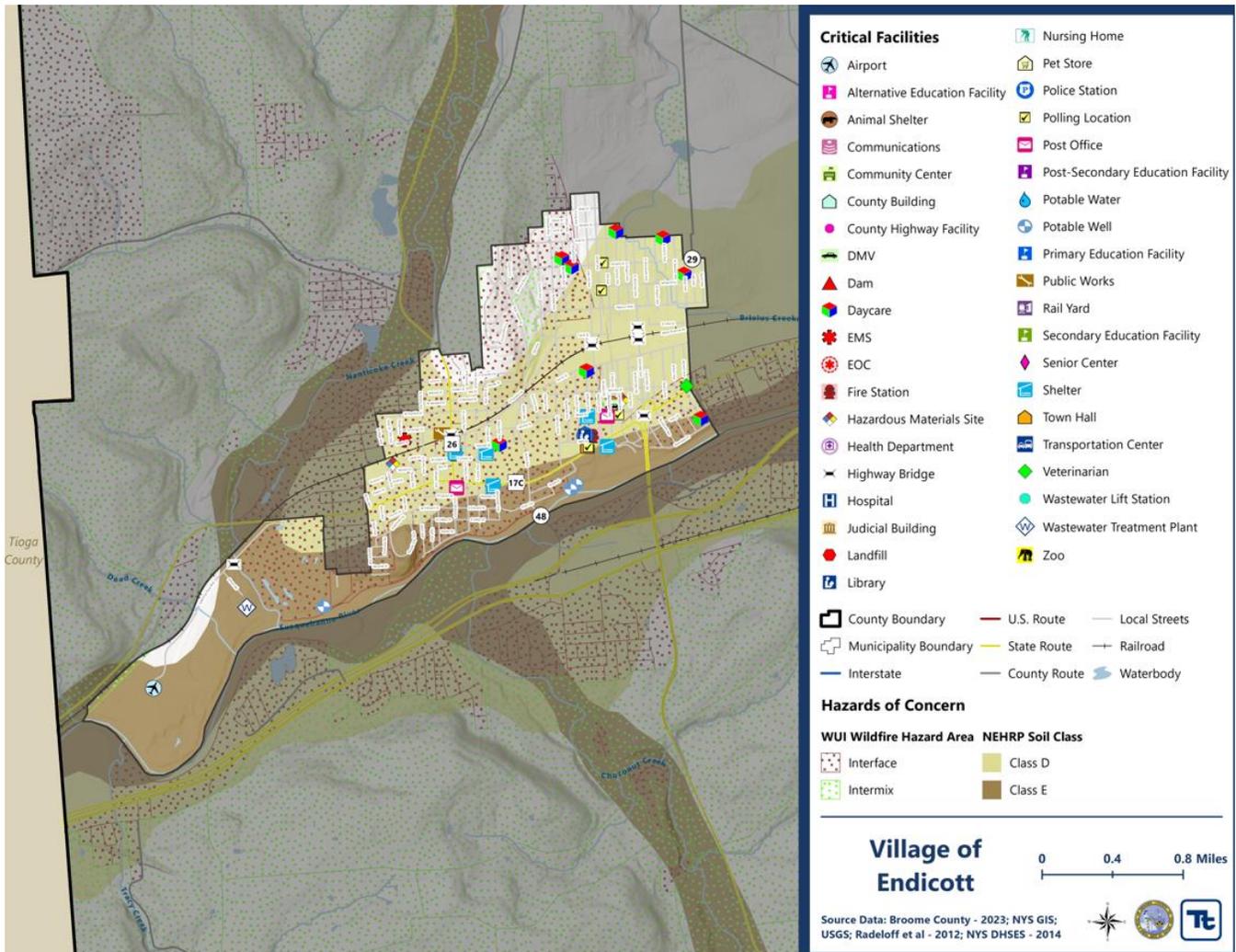




Figure 9.10-2. Village of Endicott NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Village of Endicott is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.100-14 provides details on loss and damage in the Village during hazard events since the last hazard mitigation plan update.

Table 9.100-14. Hazard Event History in the Village of Endicott

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
January 20, 2020 – May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	In addition to closures and social distancing, the Village spent \$250k for PPE, Medical Costs, Supplies
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Power Outages and downed trees.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	Although the County was impacted, the Village did not report damages.
December 17-24, 2020	Heavy Snow		Heavy Snow, Over 30 inches fell across the area. Roads were impassable until large snow removal equipment was brought in to clear the roadways.	\$90k Snow Removal Services
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	Although the County was impacted, the Village did not report damages.

Notes:

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





Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Village of Endicott.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Endicott 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 Village indicated the following:

- The hazard ranking identified in Table 9.1-15 and through the hazard ranking meeting are true. Table 9.100-15 shows Endicott’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.100-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	High
Invasive Species	Medium
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

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 9.100-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.





Table 9.100-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Well #28	Well	Yes	Yes	2024-EndicottV-04	-
Well #5	Well	Yes	Yes	2024-EndicottV-04	-
Well #32	Well	Yes	Yes	2024-EndicottV-04	-
Tri-Cities Airport	Airport	No	Yes	2024-EndicottV-04	-
Central United Methodist Church	Shelter	Yes	Yes	2024-EndicottV-09	-
Ranney Substation	Substation	Yes	Yes	EndicottV-16	Ongoing capability and maintenance to the substation.
Jennie F. Snapp Middle School	Shelter	Yes	Yes	2024-EndicottV-04	-
Holy Nativity Lutheran Church	Shelter	Yes	Yes	EndicottV-17	Ongoing capability and maintenance to the church.
Endicott Municipal Light	Utility	Yes	Yes	2024-EndicottV-04	-
George Industries	Hazardous Materials Facility	Yes	Yes	2024-EndicottV-09	-
Village of Endicott Wastewater Treatment Plant	Wastewater Treatment Plan	Yes	Yes	2024-EndicottV-04	-
Family Child Care	Daycare	Yes	Yes	2024-EndicottV-09	-
Union Volunteer ES	Polling Location	Yes	Yes	2024-EndicottV-04	-
Bridge_2267230	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_7018440	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Village of Endicott Public Works Facility	Public Works	No	Yes	2024-EndicottV-04	-
Saint Paul’s Episcopal Church	Shelter	No	Yes	2024-EndicottV-09	-
The Cat Doctor	Veterinarian	No	Yes	2024-EndicottV-09	-

Source: Broome County, 2023

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

- Patterson Brixius Grey Watershed 1 Dam located in Endwell.
- Patterson Brixius Grey Watershed 2 Dam located in Brixius Creek.

Identified Issues

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





- Brixius Creek has two 90-degree turns in the village. These turns result in heightened erosion that compromises the Creek bank, increasing the risk of the banks being overtopped, and flooding the village.
- Undersized Storm Sewer System from Skye Island Drive to Oak Hill Avenue.
- Booster stations require generators to function properly during power outages and flooding events.
- The following municipal-owned critical facilities are in the floodplain:
 - Well #28
 - Well #5
 - Well #32
 - Tri-Cities Airport
 - Jennie F. Snapp Middle School
 - Endicott Municipal Light
 - Village of Endicott Wastewater Treatment Plant
 - Union Volunteer ES
 - Village of Endicott Public Works Facility
- During Tropical Storm Lee, the infiltration and inflow of stormwater into the Village of Endicott's sanitary sewer system caused localized backups of sewage into residential homes. This program has not started. This could benefit residents in low-lying areas, however some concerns about impacting additional residents as a result.
- Ranney Well currently does not have backup power. During a power outage or flooding event, the well cannot function properly.
- The Village has dead or diseased trees in several areas that pose a risk to the public as well as our infrastructure. The Street Department and Municipal Light Department are constantly dealing with trees that are a hazard to property and life.
- Certain Parts of the Village are at risk of flooding from Levee Failures.
- The following privately owned critical facilities are located in the floodplain:
 - Central Methodist church
 - Geroge Industries
 - Family Child Care
 - Saint Paul's Episcopal Church
 - The Cat Doctor
- The following High Hazard Dams are in the Village of Endicott, or neighboring jurisdictions:
 - Patterson Brixius Grey Watershed 1
 - Patterson Brixius Grey Watershed 2



9.10.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.100-17 indicates progress on the Village'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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.100-17, the Village of Endicott identified the following mitigation efforts completed since the last HMP:

- Updated the NFIP Flood Damage Prevention Ordinance to include NYS freeboard requirements.
- Flood protection for Ranney Substation.
- Flood protection for Holy Nativity Lutheran Church.
- Installation of backup power for several critical facilities.

Since the adoption of the County's first HMP, the Village of Endicott has made significant mitigation progress in the following areas:

- Ordinance amendments.
- Flood protection for critical facilities and assets.
- Backup power for critical facilities and assets.



Table 9.100-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Endicott Village-1	Brixius Creek erosion protection	Flood	Engineering	Brixius Creek has two 90-degree turns in the village. These turns result in heightened erosion that compromises the Creek bank, increasing the risk of the banks being overtopped, and flooding the village. The village will install Ready Rock at the two 90-degree turns in Brixius Creek. Ready Rock will be installed atop geotextile mattresses if necessary to support the weight of the rock.	<ol style="list-style-type: none"> In Progress. No challenges currently. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. Brixius Creek has two 90-degree turns in the village. These turns result in heightened erosion that compromises the Creek bank, increasing the risk of the banks being overtopped, and flooding the village. The village will install Ready Rock at the two 90-degree turns in Brixius Creek. Ready Rock will be installed atop geotextile mattresses if necessary to support the weight of the rock. N/A
Endicott Village-2	East Franklin & Robble Stormwater Upgrades	Flood	Engineering	Undersized Storm Sewer System from Skye Island Drive to Oak Hill Avenue. Three underground storage tanks will be constructed. A 24" storm sewer will be built to bypass from Cornell to Skye Island Drive.	<ol style="list-style-type: none"> In Progress. No challenges currently. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. Undersized Storm Sewer System from Skye Island Drive to Oak Hill Avenue. Three underground storage tanks will be constructed. A 24" storm sewer will be built to bypass from Cornell to Skye Island Drive. N/A
		Flood	Engineering		<ol style="list-style-type: none"> Completed. 	<ol style="list-style-type: none"> Discontinue.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Endicott Village-3	South Street Pump Station for outfall pipe.			The South Street outfall pipe flows into the Susquehanna River. The end of the outfall pipe is protected by a flapper valve. However, the river elevation is usually above the elevation of the outfall pipe, resulting in the valve being closed the outfall pipe not being functional and the storm sewer backing up and causing flooding. The village will install a Stormwater pump station at South Street to ensure stormwater moves through the end of the outfall pipe and into the Susquehanna River.	2. No challenges currently.	2. N/A 3. Completed.
Endicott Village-4	Repairs to Endicott Wastewater Plant and three pumps.	Flood	Village Waste Water Treatment Plant	2006 flooding event caused damages to the Wastewater Plant. Continue to complete ongoing repairs to Endicott Wastewater Plant and three pumps as a result of 2006 flooding and evaluate	1. Completed. 2. No challenges currently.	1. Discontinue. 2. N/A 3. The majority of this work was completed via HMGP.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				wet floodproofing alternatives to protect the facility from future flood events per the 2012 Hunt Engineering report. Endicott Wastewater Plant and three pumps will be repaired and protected to a 500-year flood level.		
Endicott Village-5	Maintain existing portable and stationary backup generators	All	Village Light Department	Critical assets require backup power. Maintain existing portable and stationary backup generators at DPW facilities and other critical assets.	<ol style="list-style-type: none"> Ongoing capability No challenges currently. 	<ol style="list-style-type: none"> Discontinue. N/A Ongoing capability/maintenance procedures.
Endicott Village-6	Install permanent generator booster substations in the village	All	Village Grant Writer, OEM	Booster stations require generators to function properly during power outages and flooding events. Install permanent generators at the following booster substations in the village: Hayes Ave, Neil Road, Pine Street and Robble Avenue, Taft Heights, Lott St., Pheasant Lane	<ol style="list-style-type: none"> In Progress. No challenges currently. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. Booster stations require generators to function properly during power outages and flooding events. The Village will install permanent generators at the following booster substations in the village: Hayes Ave, Neil Road, Pine Street and Robble Avenue, Taft Heights, Lott St., Pheasant Lane N/A



SECTION 9.10. Village of Endicott

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Endicott Village-7	Stormwater System Bypass	All	Village Engineering Dept.	Undersized Storm Sewer System from Skye Island Drive to Oak Hill Avenue. Take the stormwater sewer from Cornell Ave and bypass around Skye Island Drive Bypass will be constructed.	<ol style="list-style-type: none"> No Progress. Challenges with funding capabilities. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. Undersized Storm Sewer System from Skye Island Drive to Oak Hill Avenue. The Village will explore funding opportunities to take the stormwater sewer from Cornell Ave and bypass Skye Island Drive Bypass. N/A
Endicott Village-8	Protect the Tri-Cities Airport to the 500-year flood level.	Flood	Villages facilities manager	The Airport is in the 100-year floodplain. The village will continue to raise electrical components. The village will floodproof the fuel tanks to the 500-year flood level.	<ol style="list-style-type: none"> In Progress. The village will continue to raise electrical components. The village will floodproof the fuel tanks to the 500-year flood level. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The village will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost-effective measures. N/A
Endicott Village-9	Protect Well #28 and #5 to the 500-year flood level.	Flood	Village Engineering	The Wells are in the 100-year floodplain and the protective floodwall has been overtopped previously. The village will raise the floodwall along the creek to the 500-year flood level, protecting the wells.	<ol style="list-style-type: none"> No Progress. Challenges with funding capabilities. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The village will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost-effective measures. N/A
Endicott Village-10	Protect Well #32, Ranney to the 500-year flood level.	Flood	Village Engineering	The Well is in the 100-year floodplain. The village will build a floodwall around the	<ol style="list-style-type: none"> No Progress. Challenges with funding capabilities. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The village will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood



SECTION 9.10. Village of Endicott

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Well, built to the 500-year level		level and implement the most cost-effective measures. 3. N/A
Endicott Village-11	Protect Central United Methodist Church to the 500-year flood level.	Flood	Village Floodplain Administrator	The Church is a sheltering location and is in the 100-year floodplain. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level	1. In Progress 2. No challenges currently.	1. Keep in the 2024 HMP. 2. The Village Department of Public Works will conduct public outreach to property owners on flood mitigation and funding opportunities. 3. N/A
Endicott Village-12	Protect Jennie F. Snapp Middle School from the 500-year flood level.	Flood	Village Floodplain Administrator	The School is a sheltering location in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself. The village will contact the facilities manager and discuss options for protecting the facility to the 500-year level	1. In Progress 2. No challenges currently.	1. Keep in the 2024 HMP. 2. The village will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost-effective measures. 3. N/A
Endicott Village-13	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	The current flood damage prevention ordinance (1998) does not include NYS freeboard requirements. The Flood Damage Prevention Ordinance	1. Ongoing capability. 2. No challenges currently.	1. Discontinue. 2. N/A 3. Ongoing capability.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				will be updated to include a freeboard.		
Endicott Village-14	Backflow Preventer Program	Flood, Severe Storm	Village Wastewater Treatment	During Tropical Storm Lee, the infiltration and inflow of stormwater into the Village of Endicott's sanitary sewer system caused localized backups of sewage into residential homes. : Install backflow preventer valves in approximately 45 residences	<ol style="list-style-type: none"> No progress. This program has not started. This could benefit residents in low-lying areas, however some concerns about impacting additional residents as a result. 	<ol style="list-style-type: none"> Include in the 2024 HMP. During Tropical Storm Lee, the infiltration and inflow of stormwater into the Village of Endicott's sanitary sewer system caused localized backups of sewage into residential homes. The Village will conduct outreach to residents and explore installing backflow preventer valves in approximately 45 resident areas. N/A
Endicott Village-15	Redundant Power Supply	All	Village Water	Ranney Well currently does not have backup power. During a power outage or flooding event, the well cannot function properly Solution: Install redundant power supply at Ranney Well	<ol style="list-style-type: none"> In progress. No challenges currently. 	<ol style="list-style-type: none"> Include in the 2024 HMP. Ranney Well currently does not have backup power. During a power outage or flooding event, the well cannot function properly. The Village will explore funding opportunities to install backup generators at Ranney Well. N/A
Endicott Village-16	Protect the Ranney Substation to the 500-year flood level	Flood	Village Engineering	The substation is in the 100-year floodplain. The village will explore options to protect the substation to the 500-year level and carry	<ol style="list-style-type: none"> Ongoing Capability. No challenges currently. 	<ol style="list-style-type: none"> Discontinue. N/A Ongoing capability.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				out the most cost effective option.		
Endicott Village-17	Protect the Holy Nativity Lutheran Church to the 500-year flood level	Flood	Village Floodplain Administrator	The Church is a sheltering location and is in the 100-year floodplain. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level	<ol style="list-style-type: none"> Completed N/A 	<ol style="list-style-type: none"> Discontinue. N/A Completed.
Endicott Village-18	Protect the Endicott Municipal Light to the 500-year flood level	Flood	Village Engineering	Endicott Municipal Light is in the 100-year floodplain. The village will explore options to protect Endicott Municipal Light to the 500-year level and carry out the most cost effective option.	<ol style="list-style-type: none"> No Progress. Challenges with funding capabilities. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The village will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost effective measures. N/A
2023 Endicott Village - 10	Determine and provide emergency power generation.	All	V. Endicott	The Village of Endicott WWTP, that serves 3 municipalities and the Broome County Landfill and Greater Binghamton Airport, is in need of a replacement generator. The existing generator is at the end of its useful life and does not provide power to the secondary portion of	<ol style="list-style-type: none"> In Progress The Village continues to apply for federal assistance to purchase backup power supply for critical infrastructure. 	<ol style="list-style-type: none"> Keep in the 2024 HMP The Village will explore funding opportunities to install backup generators at Ranney Well. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				our facility and treatment process. As critical infrastructure this backup power supply is necessary to provide service when line power is not available. The Village has applied for federal assistance via HMGP.		



Proposed Hazard Mitigation Initiatives for the HMP Update

Endicott participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Endicott 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 the Village’s priorities.

Table 9.100-18 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. **Error! Reference source not found.** provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.100-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	X	X		X	X				X
Disease Outbreak		X				X				X
Drought		X	X		X	X				X
Earthquake		X	X		X	X				X
Extreme Temperature		X	X		X	X				X
Flood	X	X	X	X	X	X			X	X
Invasive and Nuisance Species		X	X		X	X				X
Severe Winter Storm		X	X		X	X				X
Wildfire		X	X		X	X				X
Severe 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 stormwater 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 9.100-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-EndicottV-01	Shoreline Erosion	0	1	1	1	1	0	0	1	1	1	1	1	1	1	11	High
2024- EndicottV-02	Stormwater Sewer System Upgrades	1	1	1	1	1	0	0	1	0	1	1	1	1	1	11	High
2024- EndicottV-03	Backup Generators for Booster Substations	1	1	1	1	0	0	0	0	0	1	1	1	1	1	9	Medium
2024- EndicottV-04	Municipal-Owned Critical Facilities in Floodplain	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High
2024- EndicottV-05	Backflow Preventer Program	1	1	1	1	0	0	0	1	1	0	1	1	1	1	10	Medium
2024- EndicottV-06	Backup Generator for Ranney Well	1	1	1	1	0	0	0	0	0	1	1	1	1	1	9	Medium
2024-EndicottV-07	Mitigation of Diseased and Dead Tree Life	1	1	1	0	0	0	0	1	1	0	1	1	1	1	9	Medium
2024-EndicottV-08	Updates to Village Code Enforcement	1	1	1	1	1	1	0	0	0	1	1	1	1	1	12	High
2024-EndicottV-09	Privately Owned Critical Facilities in Floodplain	1	1	1	1	1	1	1	0	0	0	1	1	1	1	11	High
2024-EndicottV-10	Outreach to High-Hazard Dam Facilities	1	1	1	1	1	0	1	1	0	1	1	1	1	1	12	High

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



Action 2024-EndicottV-01. Shoreline Erosion

Action Name:	2024-EndicottV-01 (prev. Endicott Village-1)		
Description of the Problem:	Brixius Creek has two 90-degree turns in the village. These turns result in heightened erosion that compromises the Creek bank, increasing the risk of the banks being overtopped, and flooding the village.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The village will install a retaining wall with Ready Rock at the two 90-degree turns in Brixius Creek. Ready Rock will be installed atop geotextile mattresses if necessary to support the weight of the rock.		
Lead Agency:	Engineering Department		
Supporting Agencies:	N/A		
Estimated Cost:	High (> \$100,000)		
Potential Funding Sources:	HMGP		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 5		
Benefits:	Erosion of Creek banks reduced. Flooding risk in the village will be reduced.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Installing a retaining wall will protect socially vulnerable populations who reside near the Creek, from future flood impacts.		
Impact on Critical Facilities/Lifelines:	Critical lifelines, such as evacuation routes, will be protected from inundation during flood events through the installation of a retaining wall.		
Impact of Capabilities:	This action will strengthen the village's capabilities for emergency response during a hazardous event by restoring standards of operation when flooding occurs.		
Impact on Future Development:	This action will protect future development along the Creek from flooding and erosion.		
Climate Change Considerations:	This action accounts for climate change impacts on flooding and erosion severity and frequency.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem continues
	Retreat from areas near the Creek		Costly, unpopular
	Levee along Creek		Not feasible/environmentally damaging, costly.





Action 2024-EndicottV-02. Stormwater Sewer System Upgrades

Action Name:	2024-EndicottV-02 (prev. Endicott Village-2 and Endicott Village-7)		
Description of the Problem:	Undersized Storm Sewer System from Skye Island Drive to Oak Hill Avenue.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Three underground storage tanks will be constructed. A 24" storm sewer will be built to bypass from Cornell to Skye Island Drive.		
Lead Agency:	Engineering Department		
Supporting Agencies:	N/A		
Estimated Cost:	High (> \$100,000)		
Potential Funding Sources:	NY Rising, HMGP		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 5		
Benefits:	Reduction in Stormwater flooding.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Vulnerable populations located on Skye Island Drive through Oak Hill Avenue will be protected from stormwater sewer overflow.		
Impact on Critical Facilities/Lifelines:	The stormwater sewer system will be protected from flooding concerns and will continue to operate during flood events.		
Impact of Capabilities:	This action will ensure stormwater systems are intact and functioning safely during hazard events.		
Impact on Future Development:	This action will protect future development located near and utilizing the stormwater sewer system on these roads.		
Climate Change Considerations:	This action takes into account the increased severity and frequency of flood events due to climate change impacts.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Problem continues.
	Shut off sewer utilities when flooding forecast		Not possible, chance for error.
	Buyout homes in the area		Costly, roadways are still flooded.





Action 2024-EndicottV-03. Backup Generators for Booster Substations

Action Name:	2024-EndicottV-03 (prev. Endicott Village-6)	
Description of the Problem:	Booster stations require generators to function properly during power outages and flooding events.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	Install permanent generators at the following booster substations in the village: Hayes Ave, Neil Road, Pine Street, Robble Avenue, Taft Heights, Lott St., and Pheasant Lane.	
Lead Agency:	Village Grant Writer, Office of Emergency Management	
Supporting Agencies:	N/A	
Estimated Cost:	High (> \$100,000)	
Potential Funding Sources:	PDM, HMGP	
Implementation Timeline:	Short Term (<5yrs.)	
Goals Met:	1	
Benefits:	Loss of critical facility services is avoided.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Problem persists
	Install solar panels	Weather dependent; need a large amount of space for installation; expensive if repairs needed.





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	Install wind turbine	Weather dependent; poses a threat to wildlife; expensive repairs if needed
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Action 2024-EndicottV-04. Municipal-Owned Critical Facilities in Floodplain

Action Name:	2024-EndicottV-04 (prev. Endicott Village-8, Endicott Village-9, Endicott Village-10, Endicott Village-11, Endicott Village-12, Endicott Village-18)	
Description of the Problem:	<p>The following municipal-owned critical facilities are in the floodplain:</p> <ul style="list-style-type: none"> - Well #28 - Well #5 - Well #32 - Tri-Cities Airport - Jennie F. Snapp Middle School - Endicott Municipal Light - Village of Endicott Wastewater Treatment Plant - Union Volunteer ES - Village of Endicott Public Works Facility 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>"The Village will conduct a feasibility assessment to determine what additional floodproofing measures are needed to protect each to the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> -Elevation of facility -Floodproofing of facility -Mobile flood-barriers <p>Once the most cost-effective option is identified, the Village will carry out the option.</p> <p>"The village will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost-effective measures.</p>	
Lead Agency:	Village Facilities Manager	
Supporting Agencies:	N/A	
Estimated Cost:	High (> \$100,000)	
Potential Funding Sources:	<i>Municipal Budget</i>	
Implementation Timeline:	Short Term (<5yrs.)	
Goals Met:	1, 3, 5	
Benefits:	Critical facilities will be protected from the 500-year flood level.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	
Impact on Critical Facilities/Lifelines:	This action will protect several critical facilities within the Village, maintaining the critical services that they provide.	





Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.		
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem continues
	Relocated facilities		Costly, results in loss/delay of services
	Establish plans to enter into an MOU with neighboring critical facilities to provide service during flood events.		Reduction in response times and delay of critical services in the immediate area.



Action 2024-EndicottV-05. Backflow Preventer Program

Action Name:	2024-EndicottV-01 (prev. Endicott Village-14)	
Description of the Problem:	During Tropical Storm Lee, the infiltration and inflow of stormwater into the Village of Endicott’s sanitary sewer system caused localized backups of sewage into residential homes. This program has not started. This could benefit residents in low-lying areas, however some concerns about impacting additional residents as a result.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will conduct outreach to residents and explore installing backflow preventer valves in approximately 45 resident areas.	
Lead Agency:	Village Wastewater Treatment	
Supporting Agencies:	N/A	
Estimated Cost:	High (> \$100,000)	
Potential Funding Sources:	NY Rising, CDBG, HMGP, PDM, Municipal budget	
Implementation Timeline:	Short Term (<5yrs.)	
Goals Met:	1, 5	
Benefits:	Prevent stormwater and raw sewage from entering homes.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	This action will protect socially vulnerable populations during a hazardous event by preventing sewage backflow from occurring.	
Impact on Critical Facilities/Lifelines:	Installing a backflow preventer valve will ensure critical facilities in the area can remain safely operational during a hazardous event.	
Impact of Capabilities:	This action will ensure sewage systems will continue to function properly during a hazard event.	
Impact on Future Development:	This action will protect future development in the area from sewage backflow impacts.	
Climate Change Considerations:	This action takes into account the increased severity and frequency of flood events due to climate change impacts.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Problem continues.
	Rely on residents to mitigate sewer overflow	Unreliable, costly, not feasible.
	Install backflow without resident outreach.	Unpopular, not an option.





Action 2024-EndicottV-06. Backup Generator for Ranney Well

Action Name:	2024-EndicottV-06 (prev. Endicott Village-15)		
Description of the Problem:	Ranney Well currently does not have backup power. During a power outage from dam and levee failure, earthquakes, extreme temperatures, floods, severe storms, severe winter storms, and wildfires, the well cannot function properly. Ranney Well currently does not have backup power. During a power outage from dam and levee failure, earthquakes, extreme temperatures, floods, severe storms, severe winter storms, and wildfires, the well cannot function properly.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Village Water Department will oversee the installation of a fixed-mounted diesel-powered generator and necessary electrical components to supply backup power to Ranney Well. The Village Water Department will be responsible for the maintenance and testing of the generator following installation. The Village Water Department will oversee the installation of a fixed-mounted diesel-powered generator and necessary electrical components to supply backup power to Ranney Well. The Village Water Department will be responsible for the maintenance and testing of the generator following installation.		
Lead Agency:	Village Water Department		
Supporting Agencies:	N/A		
Estimated Cost:	Medium (\$10,000 to \$100,000)		
Potential Funding Sources:	NY Rising, CDBG, HMGP, PDM, Municipal budget		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 5		
Benefits:	Continuity of operations.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low





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Alternatives	Action	Evaluation
	No action	Problem persists
	Install solar panels	Weather dependent; need a large amount of space for installation; expensive if repairs needed.
	Install wind turbine	Weather dependent; poses a threat to wildlife; expensive repairs if needed





Action 2024-EndicottV-07. Mitigation of Diseased and Dead Tree Life

Action Name:	2024-EndicottV-07	
Description of the Problem:	The Village has stands of dead or diseased trees, presenting a risk of falling branches and trees on infrastructure and private property. Falling trees or branches could result in injuries, death, closed roadways, plugging of culverts/bridges, and damage to overhead utilities. The Village's Street and Municipal Light Departments continue to remove trees but estimate some high-hazard trees remain that are outside of the Department's capabilities due to their size or being outside of the Right-of-Way.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Village will explore options for the trimming and removal of high-hazard trees that have been damaged or killed by disease and will establish a long-term maintenance program that will be able to remove high-hazard trees as they come up. The first phase of the project after the program is established, will involve the survey of trees in the Village to determine which trees have been impacted by disease, invasive species, excessive precipitation and wind, and wildfire events. The Village will then work to remove trees by partnering with outside agencies such as utility providers and/or hiring contractors to remove the high-hazard trees. The Village will also research Municipal Law to determine if removing trees outside the R.O.W. is within their legal bounds.	
Lead Agency:	Village of Endicott Street Department and Village of Endicott Municipal Light Department	
Supporting Agencies:	Village Board	
Estimated Cost:	High (>\$100,000)	
Potential Funding Sources:	Village Budget, Grant Opportunities	
Implementation Timeline:	Short-Term (< 5 years)	
Goals Met:	1, 2, 3, 4, 5, 6	
Benefits:	Limits the potential damage from falling trees.	
Mitigation Action Type: <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will protect socially vulnerable populations, such as the elderly, from damage and life-threatening impacts of falling trees/debris.	
Impact on Critical Facilities/Lifelines:	This action reduces the risk of damage to critical infrastructure and properties.	
Impact of Capabilities:	This action strengthens the Village's capabilities to maintain healthy foliage in public spaces.	
Impact on Future Development:	This action protects future development in areas with increased foliage.	
Climate Change Considerations:	This action takes into account the future impacts of climate change on vegetation cover in the Village.	



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Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No action	Problem continues	
	Remove all trees and foliage.	Not environmentally safe, costly, and harmful to the community.	
	Plant new trees	Costly, and timely, the problem persists.	





Action 2024-EndicottV-08. Updates to Village Code Enforcement

Action Name:	2024-EndicottV-08		
Description of the Problem:	Certain Parts of the Village are at risk of flooding due to Levee Failures.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Use the Village of Endicott Code Enforcement to make sure any new development or updates to current structures in an area that is at risk of flooding from Levee Failure, follow procedures to make the area more flood resilient. Also, making sure open space areas are preserved and any development doesn't enhance the risk of damage to neighboring infrastructure.		
Lead Agency:	Village of Endicott Code Enforcement		
Supporting Agencies:	Village Board		
Estimated Cost:	Medium (>\$100,000)		
Potential Funding Sources:	Village Budget and Grants		
Implementation Timeline:	Short-Term (< 5 years)		
Goals Met:	1, 2, 3, 4, 5, 6		
Benefits:	Reduce risks and also reduce recovery costs if a major event occurs. By using strict code to prevent major damage to updated or new structures as well as Village utilities.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Adhering to strict code enforcement to prevent major damages to updated/new structures will protect socially vulnerable populations from hazard impacts.		
Impact on Critical Facilities/Lifelines:	The action reduces risks by enforcing proper codes and regulations to prevent flooding from causing major damage to infrastructure.		
Impact of Capabilities:	This action will reduce recovery costs for the Village.		
Impact on Future Development:	This action will protect future development by enforcing stricter preventative measures for new structures.		
Climate Change Considerations:	This action takes into account climate change impacts on the buildings and structures within the Village.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing		Problem persists
	Enforce old requirements		Outdated, the problem persists.
	Respond to damages after hazard impacts.		Costly, short-term solution, not sustainable.





Action 2024-EndicottV-09. Privately Owned Critical Facilities in Floodplain

Action Name:	2024-EndicottV-09	
Description of the Problem:	<p>The following privately owned critical facilities are located in the floodplain:</p> <ul style="list-style-type: none"> • Central Methodist Church • Geroge Industries • Family Child Care • Saint Paul’s Episcopal Church • The Cat Doctor 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village Department of Public Works will conduct public outreach to property owners on flood mitigation and funding opportunities.	
Lead Agency:	Town, Department of Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short (< 5 years).	
Goals Met:	1, 2	
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in better-informed facility managers of critical facilities that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation





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	Do nothing.	Critical facilities are inoperable during flood events.
	Rain gardens.	Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers	Requires deployment, short-term solution.





Action 2024-EndicottV-10. Outreach to High-Hazard Dam Facilities

Action Name:	2024-EndicottV-10	
Description of the Problem:	The following High Hazard Dams are in the Village of Endicott or neighboring jurisdictions: <ul style="list-style-type: none"> • Patterson Brixius Grey Watershed 1 • Patterson Brixius Grey Watershed 2 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will conduct outreach to inform owners of the high-hazard dams of risk and possible mitigation actions to protect against dam failure.	
Lead Agency:	Village Department of Public Works	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	High-hazard dam owners will be better educated on the risk of dam failure and be aware of possible mitigation actions to pursue.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Outreach to high-hazard dam owners will reduce flood risk to the community, by promoting mitigation actions to protect against dam failure.	
Impact on Critical Facilities/Lifelines:	This action will promote education and resources for safe and operable dams near the Town, which are a critical facility.	
Impact of Capabilities:	This action will ensure the most current data and resources are available for high-hazard dam owners in and around the Town.	
Impact on Future Development:	This action will protect future development in and around the high-hazard dams.	
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for high-hazard dam owners.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Remove dams	Not an option, costly.
	Relocate residents	Not an option, costly.





Action 2024-EndicottV-11. Outreach to High-Hazard Dam Facilities

Action Name:	2024-EndicottV-11	
Description of the Problem:	The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Village will improve public awareness of hazards, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website.	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget, HMGP	
Implementation Timeline:	Short (< 3 years)	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure an individual is working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	This action will ensure an individual is working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Impact on Critical Facilities/Lifelines:	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.	
Impact of Capabilities:	This action would build upon the Town's already existing public education and outreach program.	
Impact on Future Development:	N/A	
Climate Change Considerations:	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.	



SECTION 9.10. Village of Endicott

Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		Problem persists.
	Rely on state and federal resources.		
	Use only a few methods of distribution.		





SECTION 9.

9.11 TOWN OF FENTON

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Town of Fenton with reducing losses from future hazard events. This annex is not guidance on 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 Town of Fenton, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.11.1 Hazard Mitigation Planning Team

The Town of Fenton identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Supervisor and Engineer represented the community on the Broome County HMP Planning Partnership and 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.111-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.111-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Gary Holcomb, Supervisor Address: 44 Park Street Port Crane, New York 13833 Phone Number: 607-648-4800 Email: supervisor@townoffenton.com	Name/Title: Anthony Citriniti, Assistant Engineer Address: 44 Park Street Port Crane, New York 13833 Phone Number: 607-648-4800 Email: engineer@townoffenton.com
NFIP Floodplain Administrator	
Name/Title: Matthew Banks, Building Inspector Address: 44 Park Street Port Crane, New York 13833 Phone Number: 607-648-4800 Email: bldinsp@townoffenton.com	
Additional Contributors	
Name/Title: John Mastronardi, Town Engineer Method of Participation: Steering Committee KO Meeting, Planning Partnership KO Meeting	





9.11.2 Municipal Profile

The Town of Fenton is located in Broome County, NY. The Town of Fenton includes the communities and hamlets of Hillcrest, North Fenton, Pleasant Hill, Port Crane, Quinneville, and Wyman Corner. The Town of Fenton has a total area of 32.8 square miles. The Town is bordered to the east by the Town of Colesville, to the west by the Towns of Chenango and Baker, to the south by the Towns of Kirkwood and Dickinson, and to the north by the Town of Greene in Chenango County. The west town line is marked by the Chenango River. Chenango Lake and Lily Lake can be found in Chenango Valley State Park, a state park adjacent to the Chenango River. Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Fenton is governed by a Town Supervisor and four Town Council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Fenton was 6,429, a 3.7 percent decrease from the 2010 Census.

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 2021 U.S. Census American Community Survey indicates that 8.1 percent of the population is 5 years of age or younger, 19.0 percent is 65 years of age or older, 0.8 percent is non-English speaking, 15.0 percent is below the poverty threshold, and 12.9 percent is considered disabled.

9.11.3 Jurisdictional Capability Assessment and Integration

The Town of Fenton 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an



opportunity for the Town of Fenton to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.11-2 summarizes the planning and regulatory tools that are available to the Town of Fenton. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Building Code of New York State (2020)	State and Local	Building Inspector
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The NYS Building Code is intended to establish provisions that adequately protect public health, safety, and welfare through the minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The 2020 edition is an update to the 2018 edition published by the ICC. It is part of the Uniform Fire Prevention and Building Code.				
Zoning/Land Use Code	Yes	Chapter 150, Zoning (12/22/1976)	Local	Building Inspector, Code Enforcement, Zoning Board of Appeals
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this chapter is to encourage the most appropriate use of land, protect and conserve the value of property, and promote the health, safety, morals, and general welfare of the community by regulating the use of land; the location, use and occupancy of buildings; the height and bulk of buildings and other structures; yard areas and other open spaces; and the density of population; and to provide for its enforcement and administration and prescribe penalties for the violation of its provisions.				
Subdivision Code	Yes	Chapter 127, Subdivision of Land (6/4/1997)	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Planning Board shall consider land subdivision plats as part of a plan for the orderly and economic development of the Town. Factors to be considered shall include the following: A. Whether a proposed subdivision is of a character that can be used safely for building purposes without danger to health or peril from fire, flood, or other menace. B. Proper provision has been made for drainage, water supply, sewerage, and other needed improvements. C. All proposed lots are so laid out and of such size as to be in harmony with the development pattern of the neighboring properties. D. The proposed streets compose a convenient system conforming to any Official Map; are properly related to the proposals shown on any Master Plan; and are of a width, grade, and location to accommodate the prospective traffic, facilitate fire protection, and provide access for fire-fighting equipment to buildings. E. Proper provision has been made for open spaces for parks and playgrounds.				
Site Plan Code	Yes	Code Section 150-47, Special approval procedure	Local and County	Planning Board/Engineering
<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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>The Planning Board shall review the application and site plan, together with such other facts as shall be properly in evidence before it, and it may either reject or approve the application and site plan, subject to any conditions necessary to meet the following objectives and any other objectives required for a particular improvement or use by another subsection of this section:</p> <ul style="list-style-type: none"> (a) The proposed improvements and use, considering the nature and intensity of operations involved in connection with it, will be appropriate in the proposed location and will have no material adverse effect on existing or prospective development permitted in the district or any adjoining district. (b) The lot on which the proposed improvements or use is to be located is adequate in size. (c) The potential generation of traffic by the proposed development and use will be within the reasonable capacity of the existing streets providing access to the lot, including streets contracted for by appropriate government agencies. (d) The proposed use will be provided with adequate, properly located off-street parking, regardless of the minimum requirements of this chapter. Parking areas will be properly screened from any adjoining residential lots, and entrance and exit drives will be so located as to minimize traffic hazards. (e) A licensed professional engineer shall have rendered a written opinion that the plans for storm drainage and connections to public sewer and water facilities, if any, are adequate. 				
Stormwater Management Code	Yes	Chapter 21, Stormwater Management (3/7/2007)	Local	Building Inspector/Engineering
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in § 121-1 hereof. This chapter seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> A. Meet the requirements of Minimum Measures 4 and 5 of the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised; B. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01, or as amended or revised; C. Minimize increases in stormwater runoff from land development activities to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels; D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; E. Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and F. Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety. 				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>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.</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Chapter 81, Flood Damage Prevention 6/3/1987	Federal, State, County, and Local	Building Inspector/Engineering
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:				
A. Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities.				
B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction.				
C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters.				
D. Control filling, grading, dredging, and other development which may increase erosion or flood damages.				
E. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands.				
F. Qualify and maintain participation in the National Flood Insurance Program.				
Wellhead Protection	Yes	Chapter 57, Aquifer Protection (4/3/4991); Wellhead Protection Zone	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The purpose and intent of establishing wellhead, aquifer recharge, and watershed protection areas is to minimize the potential for contamination of the aquifer which supplies or in the future may supply water to users in the Hillcrest Water District No. 1 in the Town of Fenton, and thereby protect and maintain groundwater quality in the protection zones tributary to the Hillcrest Water District well field and to protect the general health and safety of the residents of the Town of Fenton.				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	NYS Residential Code (2010); R324.1.3.3 Freeboard	Local/State	Building Inspector/Engineering
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified. A freeboard shall not be required where it is not possible to obtain a design flood elevation from the FIRM or any method established above and the design flood elevation is three feet above the highest adjacent grade.				
Other: Municipal Separate Storm Sewer System (MS4)	Yes	Chapter 120, Storm Sewer	Local/State	Engineering
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The purpose of this article is to provide for the health, safety, and general welfare of the citizens of the Town of Fenton through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This article establishes methods for controlling the introduction of pollutants				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>into the MS4 to comply with the requirements of the State Pollution Discharge Elimination System (SPDES) General Permit for Municipal Separate Storm Sewer Systems. The objectives of this article are:</p> <ul style="list-style-type: none"> A. To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit No. GP-02-02 or as amended or revised; B. To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process, or discharge non-stormwater wastes; C. To prohibit illicit connections, activities, and discharges to the MS4; D. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this article; and E. To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment, and other pollutants into the MS4. 				
Planning Documents				
General/Comprehensive Plan	Yes	Comprehensive Plan – Being updated, 2007	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The comprehensive plan gives validity to local land use decisions. In a town with a comprehensive plan, other governmental agencies must consider the impact of capital projects on the adopted plan. By preparing a comprehensive plan, a community lays out its shared vision and builds consensus for projects and policies. A comprehensive plan can be used to protect resources and guide development.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	Yes	Chapter 81 Flood Damage Prevention	Local	Building Inspector/Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain management is located within the FDPO for the Town.				
Stormwater Management Plan	Yes	Stormwater Management Plan, 3/7/2007	Local	Engineering Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Stormwater Management Plan works to eliminate the stormwater problem areas within the Town.				
Open Space Plan	Yes	Open Space Plan, 2012	Local or County	Town Board, Conservation Advisory Committee
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The responsibility of the Open Space Plan is to control buildings and give green areas to adsorb runoff.				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYS DHSES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>This portion of the CEMP addresses the State’s overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA’s five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.</p>				
Continuity of Operations Plan	Yes	Emergency Operation Plan, (2/14/2008)	County	Broome County OEM
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.</p>				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	State	NYSDHSES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following: <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and provide an overview of the stakeholder planning group (SPG).				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.11-3 summarizes the capabilities of the Town of Fenton to oversee and track development.

Table 9.11-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> • If you issue development permits, what department is responsible? • If you do not issue development permits, what is your process for tracking new development? 	Yes	The Town Building and Code Enforcement Office
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	SFHA
Do you have a buildable land inventory? <ul style="list-style-type: none"> • If you have a buildable land inventory, please describe 	No	-





Indicate if your jurisdiction implements the following	Yes/No	Comment:
Describe the level of build-out in your jurisdiction.	N/A	There is limited land available for continued development.

Administrative and Technical Capability

Table 9.11-4 summarizes potential staff and personnel resources available to the Town of Fenton and their current responsibilities that contribute to hazard mitigation.

Table 9.11-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board is a seven-member board that meets once/a month for the Town.
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	The Conservation Advisory Committee is responsible for environmental concerns and planning within the Town.
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	No	-
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department Program and Engineering is responsible for drainage and special projects.
Mutual aid agreements	Yes	Mutual aid agreements are in place with neighboring municipalities.
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering Department Supports departments, residents, landowners, and businesses having any technical issues/concerns. The Planning Board is a seven-member board that meets once/a month for the Town.





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering Department Supports departments, residents, landowners, and businesses having any technical issues/concerns. Consultants
Planners or engineers with an understanding of natural hazards	Yes	Engineering Department Supports departments, residents, landowners, and businesses having any technical issues/concerns. The Planning Board is a seven-member board that meets once/a month for the Town.
Staff with expertise or training in benefit/cost analysis	Yes	Supervisor/Assessor is responsible for the financial advisory for the Town.
Professionals trained in conducting damage assessments.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Supervisor/Assessor is the emergency manager for the Town.
Grant writer(s)	Yes	Justice Clerk is a designated grant writer for the Town. <i>Consider the following:</i> Are data and maps from the HMP used to support documentation in grant applications?
Resilience Officer	No	-
Other: NFIP Floodplain Administrator (FPA)		The Building Inspector is the NFIP FPA for the Town.

Fiscal Capability

Table 9.11-5 summarizes financial resources available to the Town of Fenton.

Table 9.11-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	Yes
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





Financial Resources	Accessible or Eligible to Use? (Yes/No)
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.11-6 summarizes the education and outreach resources available to the Town of Fenton.

Table 9.11-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.11-7 summarizes classifications for community programs available to the Town of Fenton.

Table 9.11-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other: Public education program/outreach through website, social media	Yes	Broome-Tioga Stormwater Coalition	Unknown

Note:

N/A Not applicable
 - Unavailable





Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.11-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.11-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

9.11.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.11-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.11-9 summarizes the NFIP statistics for the Town of Fenton.

Table 9.11-9. Town of Fenton NFIP Summary of Policy and Claim Statistics

# Policies	22
# Claims (Losses)	47
Total Loss Payments	\$546,088
# Repetitive Loss Properties (NFIP definition)	7
# Repetitive Loss Properties (FMA definition)	1
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.11-10 provides a summary of the NFIP program in the Town of Fenton.

Table 9.11-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Low-lying areas in the Town are subject to repeated flood exposure.
Do you maintain a list of properties that have been damaged by flooding?	No, the Town does not maintain a list of properties that have been damaged due to flooding.
Do you maintain a list of property owners interested in flood mitigation?	No, the Town does not maintain a list of property owners interested in flood mitigation.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown, at this time.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	Yes, 99 and 127 W. Service Rd. fill and open storage structures are being reviewed but not approved yet.
How do you make Substantial Damage determinations?	If repairs will cost 50% or more of its market value.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Floods occurred before the current Building Inspector’s employment.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	There have been five new projects all elevated within the Town.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes, the Town’s maps adequately address the flood risk within the Town.
NFIP Compliance	
What local department is responsible for floodplain management?	The Building Inspector is responsible for floodplain management within the Town.
Are any certified floodplain managers on staff in your jurisdiction?	No, there are no certified floodplain managers on staff in the Town.
Do you have access to resources to determine possible future flooding conditions from climate change?	No, the Town does not have access to resources to determine future flooding conditions from climate change.
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes, certification training would be beneficial to the Town.





NFIP Topic	Comments
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town is involved in Permit review with the Town Engineer, and inspections that use GIS for floodplain information.
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	If the cost is 50% more than the market value.
What are the barriers to running an effective NFIP program in the community, if any?	Not applicable to the Town at this time.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	W. Service Rd. issues, storage of materials in the floodplain.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	7-8 years ago.
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 81, Town of Fenton Code
What is the date that your flood damage prevention ordinance was last amended?	6/3/1987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	The floodplain management program meets the minimum requirements.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Town Engineering and the Planning Board support floodplain management within the Town.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The town is undecided at this time.

9.11.5 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 9.11-11 through Table 9.11-13

Table 9.11-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	32	0	8	40
Permits within SFHA	0	0	0	0





	New Construction Permits Issued			
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
2020				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.11-12. Recent Major Development and Infrastructure from 2018 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
None Identified					

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

Table 9.11-13. 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
None Anticipated					

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

9.11.6 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 Town of Fenton’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in 9.11-1 and 9.11-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Fenton has significant exposure. The maps show the location of potential new development, where available.





Figure 9.11-1. Town of Fenton Flood Hazard Area Extent and Location Map

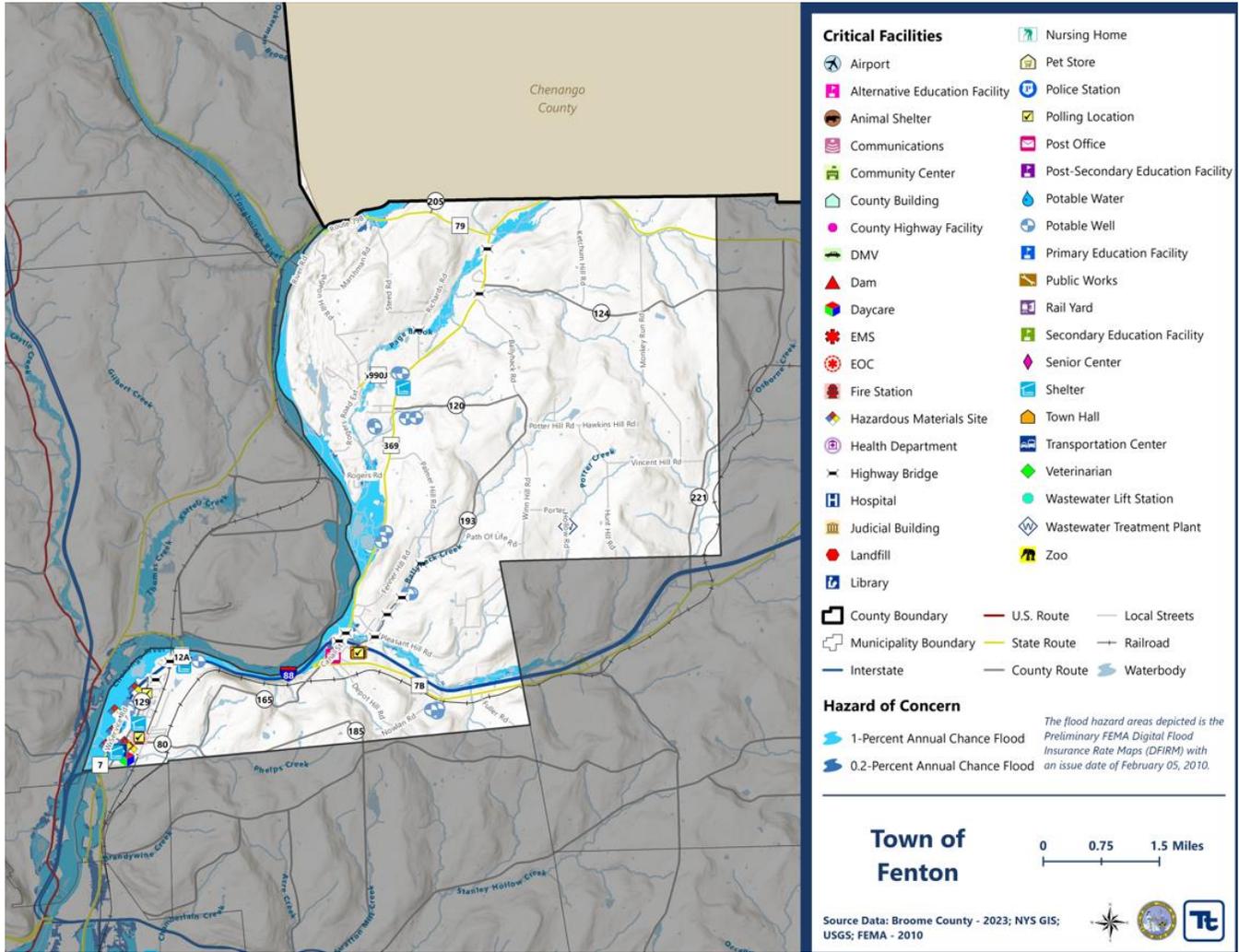
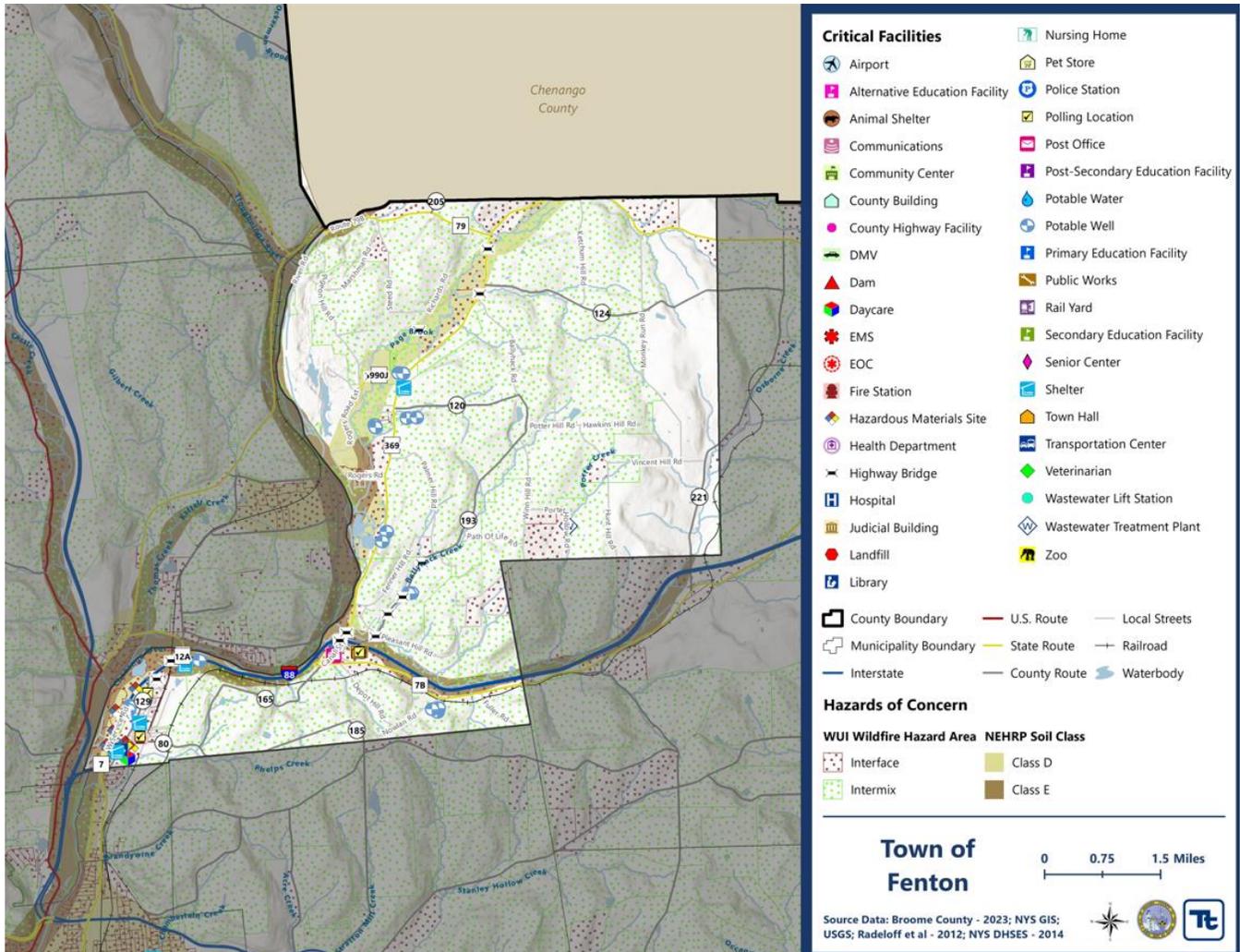




Figure 9.11-2. Town of Fenton NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Fenton is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.111-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.111-14. Hazard Event History in the Town of Fenton

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	While the County was impacted, the Town did not report significant damages from this event.
January 20, 2020 – May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town was subject to closures and social distancing/masking requirements.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	While the County was impacted, the Town did not report significant damages from this event.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Town Highway Department crews had to cut and remove fallen trees along several roadways as well as plow the snow, however, the efforts were addressed during their day-to-day operations and did not result in significant damage or loss.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Fenton.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Fenton 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 Town indicated the following:

- The Town agrees with the hazard ranking in Table 9.1-15 as developed in the Hazard Ranking meeting.

Table 9.111-15 shows Fenton’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.111-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

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 9.111-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.111-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Warehouse	Hazardous Materials Facility	Yes	Yes	Action 2024-FentonT-05	-
Binghamton First Church of Nazarene	Shelter	Yes	Yes	Action 2024-FentonT-05	-
Bridge_1046820	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_1046830	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_1050220	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_1073750	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_1073770	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_2225510	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_3349350	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Abbey Business Properties LLC	Hazardous Materials Facility	No	Yes	Action 2024-FentonT-05	-
Eireannach Holdings LLC	Hazardous Materials Facility	No	Yes	Action 2024-FentonT-05	-
First Student Inc. #20602	Hazardous Materials Facility	No	Yes	Action 2024-FentonT-05	-

Source: Broome County, 2023

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

- Brandywine Creek Site 1 Dam located in Chenango River.
- Little Choconut Site 2e Dam Located in West Chenango.

Identified Issues

After review of the Town of Fenton’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Fenton identified the following vulnerabilities within their community:

- The Town has stands of dead or diseased trees, presenting a risk of falling branches and trees on infrastructure and private property. Falling trees or branches could result in injuries, death, closed roadways, plugging of culverts/bridges, and damage to overhead utilities. The Town's Highway Department continues to remove trees but estimates some high-hazard trees remain that are outside of the Department's capabilities due to their size or being outside of the Right-of-Way.
- The status of the Town's bridges and culverts in relation to withstand hazard events is unknown. Failure of bridges or culverts could result in loss of life, damage to infrastructure, and limitations to emergency access.





- During heavy rainfall events the (unnamed) stream becomes unstable and carries a large amount of bed load and silt/sand deposits which eventually plug the box culvert running below Canal Street. The culverts' reduced capacity will force stormwater to overtop the roadway and cause localized flooding. This occurs 2-3 times a year. The flooding limits access to the neighborhood and affects 3-4 businesses due to basement flooding. The area is generally inaccessible for approximately 12-24 hours until flood waters recede. Town DPW forces are cleaning the debris from the stream almost monthly to minimize future flooding.
- There are 7 Repetitive Loss Properties located within the Town of Fenton.
- The following privately owned critical facilities are located in the floodplain:
 - Warehouse
 - Hickory Ridge Mobile Court
 - Binghamton First Church of the Nazarene
 - Abbey Business Properties LLC, Eireannach Holdings LLC
 - First Student Inc. #20602.These areas are prone to damage during flood events.
- Well 1 lacks a backup power source.
- The following High Hazard Dams are in the Town of Kirkwood or neighboring jurisdictions:
 - Brandywine Creek Site 1 Dam located in Chenango River.
 - Little Choconut Site 2e Dam Located in West Chenango.

9.11.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.111-17 indicates progress on the Town'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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.111-17, the Town of Fenton identified the following mitigation efforts completed since the last HMP:

- The culvert on Monkey Run Road has been replaced with a concrete box culvert with a larger opening including armored inlet and outlet protection.
- The preliminary designs for storm sewer replacement at Albany St. and Pine St. Port Crane have been completed to date.
- Updates to the NFIP Flood Damage Prevention Ordinance



Since the adoption of the County's first HMP, the Town of Fenton has made significant mitigation progress in the following areas:

- Ordinance updates.
- Culvert upgrades.
- Stormwater Management.



Table 9.11-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Fenton-1	Monkey Run Road Culvert	Flood	Town DPW & Engineer	Currently, Monkey Run Road is closed until a replacement culvert can be installed likely not until Spring 2019. The detour around Monkey Run Rd. is approximately 4 miles long. There is a history of impacts on location with the replacement of the culvert in 2016. Phase 1: Provide engineering design of upgraded culvert. Phase 2: Replace a large culvert that recently failed on Monkey Run Road with a concrete box culvert with wing walls to reduce scour.	<ol style="list-style-type: none"> Completed The culvert has been replaced with a concrete box culvert with a larger opening including armored inlet and outlet protection. 	<ol style="list-style-type: none"> Discontinue. N/A Completed
Fenton-2	Canal St. & Albany St.	Flood	Town DPW & Engineer	<p>During heavy rainfall events, the (unnamed) stream becomes unstable and carries a large amount of bed load and silt/sand deposits which eventually plug the box culvert running below Canal Street.</p> <p>The culvert's reduced capacity will force stormwater to overtop the roadway and cause localized flooding. This occurs 2-3 times a year. The flooding limits access to the neighborhood and affects 3-4 businesses due to basement flooding. The area is generally inaccessible for approximately 12-24 hours until flood waters recede. Town DPW forces are cleaning the debris from the stream almost monthly to minimize future flooding. The road closure affects the Port Crane Volunteer Fire Station requiring detours for vehicles Provide streambank restoration and armor stream banks upstream from the mouth of the culvert to Route 7.</p>	<ol style="list-style-type: none"> No Progress. Challenges with funding opportunities. The Town will continue to seek funding sources to make the project feasible. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The Town will seek funding to upgrade the culverts on Canal St. and Albany St. to be able to withstand heavy sediment loads from the stream during heaving precipitation and flooding events. N/A
Fenton-3	Analyze storm sewer GIS data for potential upgrades to infrastructure.	Flood, Severe Storm	Town/County	Drainage inventory is underway. The Town will use GIS information to determine where to target upgrades in the storm sewer system	<ol style="list-style-type: none"> No Progress. N/A 	<ol style="list-style-type: none"> Discontinue. N/A This mitigation action will be replaced with a new action under the Town Wide Bridge & Culvert Assessment project.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Fenton-4	Storm Sewer Replacement Albany St Pine Street Port Crane	Flood, Severe Storm	Town	The storm sewer is past its usable life. Preliminary design completed	1. Ongoing Capability 2. The preliminary designs for storm sewer replacement have been completed to date.	1. Discontinue. 2. N/A 3. In progress/ongoing capability underway.
Fenton-5	Protect the Hickory Ridge Mobile Court from the 500-year flood level.	Flood	Town facilities manager	The Mobile Home Park is in the 100-year floodplain. The Town does not have jurisdiction over the facility and cannot mitigate themselves. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level to discuss	1. No Progress. 2. N/A	1. Discontinue. 2. N/A 3. The Hickory Mobile Court is owned by a private entity therefore the Town has no jurisdiction or vested interest over its operation. Furthermore, the facility is not a critical facility.
Fenton-6	Protect the Binghamton First Church of the Nazarene from the 500-year flood level.	Flood	Town facilities manager	The Church is a sheltering location and is in the 100-year floodplain. The Town does not have jurisdiction over the facility and cannot mitigate themselves. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level to discuss	1. No Progress. 2. The code officer will reach out to the operations manager to determine if there is interest in mitigating the facility.	1. Keep in the 2024 HMP. 2. Three structures are located within the floodplain: Warehouse, Hickory Ridge Mobile Court, and Binghamton First Church of the Nazarene. These areas are prone to damage during flood events. Conduct outreach to property owners located in the floodplain 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 mitigation measures in the flood-prone areas that experience frequent flooding (high-risk areas). 3. N/A
Fenton-7	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	The current flood damage prevention ordinance does not include NYS freeboard requirements. The flood damage prevention ordinance will be updated to include NYS freeboard requirements.	1. Completed. 2. N/A	1. Discontinue. 2. N/A 3. Completed.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Fenton-8	Make provisions at Well 1 for a portable generator to provide water power at times of utility power failure.	All	Town	Well, 1 lacks a backup power source. The Town will install components for generator hookup and purchase a portable backup generator.	<ol style="list-style-type: none"> 1. In Progress. 2. The Town has recently completed major upgrades to the Water Plant. The 2nd Phase of upgrades will be the purchase and installation of an emergency generator for Well #1. 	<ol style="list-style-type: none"> 1. Keep in the 2024 HMP. 2. Well 1 lacks a backup power source. The Town will install components for generator hookup and purchase a portable backup generator. 3. N/A



Proposed Hazard Mitigation Initiatives for the HMP Update

Fenton participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Fenton 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 the Town’s priorities.

Table 9.111-18 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. Table 9.111-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.111-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure		X		X	X	X				X
Disease Outbreak		X				X				
Drought		X				X				
Earthquake		X				X				
Extreme Temperature		X				X				
Flood	X	X	X	X	X	X		X	X	X
Invasive and Nuisance Species	X	X	X		X	X		X		
Severe Storm	X	X	X	X	X	X		X	X	X
Severe Winter Storm	X	X	X		X	X		X		
Wildfire	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 stormwater 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 9.11-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-FentonT-01	Mitigation of Diseased and Dead Trees	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High
2024- FentonT - 02	Town-Wide Bridge and Culvert Assessment	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2024- FentonT - 03	Canal Street Culvert Replacement	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High
2024- FentonT - 04	Repetitive Loss Mitigation	1	1	1	0	1	1	1	0	1	1	1	1	1	1	12	High
2024- FentonT - 05	Outreach to Property Owners in Floodplain	1	1	1	0	1	1	1	1	1	1	1	1	1	1	13	High
2024- FentonT - 06	Backup Generator	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High
2024- FentonT - 07	Outreach to High-Hazard Dam Facilities	1	1	1	1	1	0	1	1	0	1	1	1	1	1	12	High

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



Action 2024-FentonT-01. Mitigation of Diseased and Dead Trees

Action Name:	2024-FentonT-01	
Description of the Problem:	The Town has stands of dead or diseased trees, presenting a risk of falling branches and trees on infrastructure and private property. Falling trees or branches could result in injuries, death, closed roadways, plugging of culverts/bridges, and damage to overhead utilities. The Town's Highway Department continues to remove trees but estimates some high-hazard trees remain that are outside of the Department's capabilities due to their size or being outside of the Right-of-Way.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will explore options for the trimming and removal of high-hazard trees that have been damaged or killed by disease and will establish a long-term maintenance program that will be able to remove high-hazard trees as they come up. The first phase of the project after the program is established, will involve the survey of trees in the Town to determine which trees have been impacted by disease, invasive species, excessive precipitation and wind, and wildfire events. The Town will then work to remove trees by partnering with outside agencies such as utility providers and/or hiring contractors to remove the high-hazard trees. The Town will also research Municipal Law to determine if removing trees outside the R.O.W. is within their legal bounds.	
Lead Agency:	Highway Department	
Supporting Agencies:	Town Board	
Estimated Cost:	High (>\$100,000)	
Potential Funding Sources:	HMGP, BRIC, Town Budget	
Implementation Timeline:	Medium (> 5 years)	
Goals Met:	1, 2, 3, 4, 5, 6	
Benefits:	Reduction in damages or injuries from falling trees.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Removal of high-hazard trees will protect socially vulnerable populations and homes from damage.	
Impact on Critical Facilities/Lifelines:	This action reduces impacts to critical facilities from downed trees.	
Impact of Capabilities:	This action will ensure Town maintenance capabilities are efficient and effective in maintaining healthy foliage.	
Impact on Future Development:	This action will protect future development in areas where there are high-hazard trees.	
Climate Change Considerations:	N/A	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No action.	Problem persists.	
	Ask residents to alert the Town to dangerous	Reactive. Likely to miss most trees.	
	Remove all trees along areas with powerlines and property	Not feasible/environmentally damaging	



Action 2024-FentonT-02. Town-Wide Bridge and Culvert Assessment

Action Name:	2024-FentonT-2	
Description of the Problem:	The status of the Town's bridges and culverts in relation to withstand hazard events is unknown. Failure of bridges or culverts could result in loss of life, damage to infrastructure and limitations to emergency access.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Perform a Town-wide bridge and culvert assessment on an annual basis. The assessments should be well documented on applicable inspection forms. After the assessment, the Town will prioritize the repair, retrofit, or replacement of each structure. High-priority structures will then be analyzed based on project cost, schedule, and available funding sources.	
Lead Agency:	Town Engineer & Highway Department	
Supporting Agencies:	Town Board	
Estimated Cost:	Medium (>\$100,000)	
Potential Funding Sources:	HMGP, BRIC Grants, NYSDOT Grants, Municipal Budget	
Implementation Timeline:	Medium (>5 years)	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	Infrastructure protected from hazard damages.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations located near culverts and bridges will be protected against impacts from flooding and severe weather events.	
Impact on Critical Facilities/Lifelines:	The bridges and culverts are identified as community lifelines and this mitigation action will increase their ability to withstand future hazard events.	
Impact of Capabilities:	This action will ensure the capabilities of bridges and culverts within the Town will remain efficient and effective during hazard events.	
Impact on Future Development:	This action will protect future development located near culverts and bridges.	
Climate Change Considerations:	New or rehabilitated structures will be designed to handle increased stormwater discharge and/or velocities that can be attributed to climate change.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Raingardens	Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.





	Deployable flood-barriers	Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.
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Action 2024-FentonT-03. Canal Street Culvert Replacement

Action Name:	2024-FentonT-03 (prev. Fenton-2)	
Description of the Problem:	During heavy rainfall events, the (unnamed) stream becomes unstable and carries a large amount of bed load and silt/sand deposits which eventually plug the box culvert running below Canal Street. The culverts' reduced capacity will force stormwater to overtop the roadway and cause localized flooding. This occurs 2-3 times a year. The flooding limits access to the neighborhood and affects 3-4 businesses due to basement flooding. The area is generally inaccessible for approximately 12-24 hours until flood waters recede. Town DPW forces are cleaning the debris from the stream almost monthly to minimize future flooding.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town DPW will complete the necessary upsizing for those culverts noted to be undersized based on the Town-Wide Bridge and Culvert Assessment (2024-FentonT-2).	
Lead Agency:	Engineering Department, Department of Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	High (> \$100,000)	
Potential Funding Sources:	HMGP, BRIC, CHIPS, operating budget	
Implementation Timeline:	Short (< 5 years)	
Goals Met:	2	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Areas that were previously vulnerable to frequent or severe flooding events will be less likely to be impacted by flooding events.	
Impact on Critical Facilities/Lifelines:	Access to health and medical facilities will be maintained, both for healthcare workers and the population who require treatment for injuries and illnesses.	
Impact of Capabilities:	The action is likely to result in maintained access for first responders.	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	
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 a result of climate change.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Problem persists.
	Remove roadway.		The roadway cannot be removed, not feasible.
	Rain gardens.		Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.



Action 2024-FentonT-04. Repetitive Loss Mitigation

Action Name:	2024-FentonT-04		
Description of the Problem:	There are 7 Repetitive Loss Properties located within the Town of Fenton.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct outreach to the RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application/purchase/moving/elevating residential homes in flood-prone areas that experience frequent flooding (high-risk areas).		
Lead Agency:	Town		
Supporting Agencies:	N/A		
Estimated Cost:	High (>\$100,000)		
Potential Funding Sources:	FEMA HMGP and FMA, BRIC, local cost share by residents		
Implementation Timeline:	Medium (5-10 years)		
Goals Met:	3		
Benefits:	Eliminates flood damage to homes and residents, and creates open space for the municipality increasing flood storage.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Removing homes from the floodplain immediately removes the risk to life and property.		
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
Impact on Future Development:	Increased outreach to homeowners within a flood-prone area will limit construction in areas that are prone to hazard events.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	Do nothing.	The current problem persists.
	Elevate homes.	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads.
	Deployable flood-barriers	Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2024-FentonT-05. Outreach to Property Owners in Floodplain

Action Name:	2024-FentonT-05 (prev. Fenton-6)	
Description of the Problem:	<p>The following privately owned critical facilities are located in the floodplain:</p> <ul style="list-style-type: none"> - Warehouse - Hickory Ridge Mobile Court - Binghamton First Church of the Nazarene - Abbey Business Properties LLC, Eireannach Holdings LLC - First Student Inc. #20602. <p>These areas are prone to damage during flood events.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Conduct outreach to property owners located in the floodplain 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 mitigation measures in the flood-prone areas that experience frequent flooding (high-risk areas).	
Lead Agency:	Town Planning Department	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	BRIC, FMA, HMGP, match from property owners	
Implementation Timeline:	Short (< 5 years)	
Goals Met:	1, 2	
Benefits:	Eliminates flood damage to homes and structures that are located in the floodplain.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Collecting data regarding property owners who own property within floodplain areas provides an opportunity to introduce location-specific opportunities for assistance.	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	N/A	
Impact on Future Development:	Increased outreach to property owners within a flood-prone area will limit construction in areas that are prone to hazard events.	
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. This action will explore ways to reduce climate change impacts due to increased inundation in the floodplain.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Problem persists.
	Levee around floodplain		Costly, not enough room.
	Deployable flood-barriers		Requires deployment. Property owners may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2024-FentonT-06. Backup Generator

Action Name:	2024-FentonT-06 (prev. Fenton-8)		
Description of the Problem:	Well, 1 lacks a backup power source.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town has recently completed major upgrades to the Water Plant. The 2nd Phase of upgrades will be the purchase and installation of an emergency generator for Well #1. The Town will install components for generator hookup and purchase a portable backup generator.		
Lead Agency:	Town Engineering Department		
Supporting Agencies:	N/A		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	HMGP, PDM, Municipal budget		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 4, 5		
Benefits:	Allow for providing municipal water at times of power failure.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action	Problem persists
	Microgrid	Costly and difficult to implement.
	Solar panels and battery backup	Solar power is unlikely to be able to provide battery power for extended power failure events.



Action 2024-FentonT-07. Outreach to High-Hazard Dam Facilities

Action Name:	2024-FentonT-07	
Description of the Problem:	The following High Hazard Dams are in the Town of Kirkwood or neighboring jurisdictions: <ul style="list-style-type: none"> • Brandywine Creek Site 1 Dam located in Chenango River. • Little Choconut Site 2e Dam Located in West Chenango. 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will conduct outreach to inform owners of the high-hazard dams of risk and possible mitigation actions to protect against dam failure.	
Lead Agency:	Town Department of Public Works	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	High-hazard dam owners will be better educated on the risk of dam failure and be aware of possible mitigation actions to pursue.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Outreach to high-hazard dam owners will reduce flood risk to the community, by promoting mitigation actions to protect against dam failure.	
Impact on Critical Facilities/Lifelines:	This action will promote education and resources for safe and operable dams near the Town, which are a critical facility.	
Impact of Capabilities:	This action will ensure the most current data and resources are available for high-hazard dam owners in and around the Town.	
Impact on Future Development:	This action will protect future development in and around the high-hazard dams.	
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for high-hazard dam owners.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Remove dams	Not an option, costly.
	Relocate residents	Not an option, costly.



Action 2024-FentonT-08. Outreach to High-Hazard Dam Facilities

Action Name:	2024-FentonT-08	
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.	
Lead Agency:	Town Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	
Impact on Critical Facilities/Lifelines:	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.	
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.	
Impact on Future Development:	N/A	
Climate Change Considerations:	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.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action.	Problem persists.
	Rely on State or Federal resources.	Not an option, costly.
	Use only a few methods for distribution.	Not an option, costly.



SECTION 9.

9.12 VILLAGE OF JOHNSON CITY

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist the public and private sectors in the Village of Johnson City with reducing losses from future hazard events. This annex is not guidance on 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 Village of Johnson City, describes who participated in the planning process, assesses the Village’s risk, vulnerability, and capabilities, and outlines a strategy to become more resilient to the effects of climate change throughout the community.

9.12.1 Hazard Mitigation Planning Team

The Village of Johnson City identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Village departments. The Director of Public Works represented the community on the Broome County HMP Planning Partnership and 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.12-1 summarizes Village officials who participated in the development of the annex and what capacity. Additional documentation of the Village’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.12-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Joshua Holland, Director of Public Works Address: 60 Lester Ave Phone Number: 607-797-3031 Email: jcdops@villageofjc.com	Name/Title: Stephanie Yezzi, Director of Planning Address: 60 Lester Ave Phone Number: 607-798-7861 ext.5234 Email: planningdirector@villageofjc.com
NFIP Floodplain Administrator	
Name/Title: Randy Shear, Code Enforcement Officer Address: 60 Lester Ave Phone Number: 607-797-1021 Email: codeofficer@villageofjc.com	
Additional Contributors	
Name/Title: Joshua Holland, Director of Public Works Method of Participation: Steering Committee KO Meeting,	



9.12.2 Municipal Profile

The Village of Johnson City is in the Town of Union in Broome County, NY. For more information on the Town of Union, refer to Section 9.21. The Village of Johnson City is adjacent to the north side of the Susquehanna River. The Village of Johnson City has a total area of 4.6 square miles. The Village is part of the "Triple Cities," along with the Village of Endicott on the Southwest, and the City of Binghamton on the West. The Junction of NY-17 and 201 is located in Central Johnson City, while Route 17 runs parallel through the downtown (Main Street). The Village of Johnson City is governed by the Mayor and four Village Trustees (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Village of Johnson City was 15,343, a 1.1 percent increase from the 2010 Census.

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 several 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 2020 U.S. Census American Community Survey indicates that 5.4 percent of the population is 5 years of age or younger, 18.7 percent is 65 years of age or older, 2.3 percent is non-English speaking, 19.1 percent is below the poverty threshold, and 17.7 percent is considered disabled.

9.12.3 Jurisdictional Capability Assessment and Integration

The Village of Johnson City 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Village of Johnson City to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.



Planning, Legal, and Regulatory Capability and Integration

Table 9.12-2 summarizes the planning and regulatory tools that are available to the Village of Johnson City. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.12-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Building Code of New York State (2020)	State and Local	Code Department
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The NYS Building Code is intended to establish provisions that adequately protect public health, safety, and welfare through the minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The 2020 edition is an update to the 2018 edition published by the ICC. It is part of the Uniform Fire Prevention and Building Code.</p>				
Zoning/Land Use Code	Yes	Chapter 300, Zoning (5/3/2011)	Local	Code Enforcement Officer & Village Planning/Zoning Boards
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Zoning Ordinance implements the goals and objectives of the 2008 Unified Comprehensive Plan, which include:</p> <ul style="list-style-type: none"> A. Providing a wide variety of living environments for all socioeconomic groups in the population and a diversity of housing densities and types, ranging from rural low density to urban high density. B. Providing a sound commercial base, offering convenience, choice, and a wide variety of goods and services. C. Improving the economy by promoting new and expanded industrial enterprises, retaining existing enterprises, and redeveloping existing industrial facilities in order to further diversify the economic base and to provide for increased employment on a permanent basis. D. Providing a transportation network that is capable of moving people and goods efficiently and safely. E. Maintaining the infrastructure at a level needed to continue adequate services to Town and Village residents. F. Enriching the lives of all citizens by striving to improve the quality of the environment. G. Accommodating solar energy systems, equipment, and access to sunlight. 				
Subdivision Code	Yes	Chapter 244 Subdivision of Land	Local	Code Enforcement Officer & Village Planning/Zoning Boards
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Subdivisions Ordinance requires measures and reviews to prevent buildings that would impair flood hazard areas.</p>				
Site Plan Code	Yes	Section 300 Article 63 https://ecode360.com/15494714	Local and County	Planning Department, Code Enforcement Office & Village Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Site Plan Ordinance requires measures and reviews to prevent buildings that would impair flood hazard areas.</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Stormwater Management Code	Yes	Chapter 238, Stormwater Management and Erosion and Sediment Control (5/27/2007)	Local	Public Works
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in § 238-1 hereof. This chapter seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> A. Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, or as amended or revised; B. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01, or as amended or revised; C. Minimize increases in stormwater runoff from land development activities to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels; D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; E. Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and F. Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety. 				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>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.</p>				
Growth Management	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Environmental Protection Ordinance(s)	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Flood Damage Prevention Ordinance	Yes	Chapter 156 Flood Damage Prevention (5/3/2011)	Federal, State, County, and Local	Village
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <ul style="list-style-type: none"> (1) Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities. (2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. 				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. (4) Control filling, grading, dredging, and other development which may increase erosion or flood damages. (5) Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. (6) Qualify for and maintain participation in the National Flood Insurance Program.				
Wellhead Protection	Yes	Section 272 Wellhead, Aquifer Recharge, and Watershed Protection Zones	State, Local	Public Works/Water
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose and intent of establishing the Wellhead, Aquifer Recharge, and Watershed Protection Zones described below are to minimize the potential for contamination of the aquifer which currently supplies or in the future may supply water to the residents of the Village of Johnson City. In promoting the general intent of these regulations, the specific intent is to: <u>A.</u> Protect and maintain groundwater quality in the protection districts tributary to the wells that supply water to the residents of the Village of Johnson City. <u>B.</u> Protect the general health and safety of the residents of the Village of Johnson City.				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Municipal Separate Storm Sewer System (MS4)	Yes	Section 237	Local	Public Works
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of this article is to provide for the health, safety, and general welfare of the citizens of the Village of Johnson City through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This article establishes methods for controlling the introduction of pollutants into the MS4 to comply with the requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems. The objectives of this article are: A. To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit No. GP-02-02, or as amended or revised; B. To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process, or discharge non-stormwater wastes; C. To prohibit illicit connections, activities, and discharges to the MS4; D. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this article; and E. To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment, and other pollutants into the MS4				
Other: Freeboard	Yes	NYS Residential Code (2010); R324.1.3.3 Freeboard	Local and State	Public Works
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified. A freeboard shall not be required where it is not possible to obtain a design flood elevation from the FIRM or any method established above and the design flood elevation is three feet above the highest adjacent grade.				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Planning Documents				
General/Comprehensive Plan	Yes	Unified Comprehensive Plan (2008)	Local	Town of Union
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The comprehensive plan was divided into 25 neighborhoods within the Town of Union, the Village of Endicott, and the Village of Johnson City. These entities held meetings to discuss a number of concerns and issues facing the community. Some elements discussed include:</p> <ul style="list-style-type: none"> - Agriculture - Regional issues - Economic development - Transportation - Land use - Parks and recreation 				
Capital Improvement Plan	Yes	Annual Budget, 2023-2024	Local	Village
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Capital Improvements to Village Infrastructure are planned as part of every annual budget. These improvements help to prepare the Village for wet weather events and flood resiliency.</p>				
Disaster Debris Management Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Floodplain Management or Watershed Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Stormwater Management Plan	Yes	Village of Johnson City Stormwater Management Program Plan (06/2022)	State, Local	Public Works
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>This SWMP Plan has been developed to comply with Part IV. A of the NYS DEC General SPDES Permit for a Traditional Non-Land Use Control.</p>				
Open Space Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Urban Water Management Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Habitat Conservation Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Economic Development Plan	Yes	Town of Union Comprehensive Plan (2018); Economic Development	Local	Town of Union
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Economic Development Plan provides direction and strategies to promote economic growth for the Village.</p>				
Community Wildfire Protection Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Community Forest Management Plan	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	Yes	Binghamton Metropolitan Transportation Study	Regional	BMTS
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Binghamton Metropolitan Transportation Study is a regional transportation planning agency. Designated under Federal law as a Metropolitan Planning Organization (MPO), BMTS is responsible for developing transportation plans and programs. These plans explore both long-range and near-term needs of the transportation system, and how those needs relate to broader community goals of mobility, quality of life, and economic growth.</p> <p>The plans address not only potential new transportation facilities, but also the need to maintain our existing streets and roads, bridges, and transit systems. They are multimodal, reflecting the complexity of the metropolitan transportation system in which people move by auto, by bus, by bicycle, and on foot; and where goods move by truck, by rail, and by air. It also reflects the close linkage between land use and transportation investment.</p> <p><i>Consider the following:</i></p> <ul style="list-style-type: none"> • Does the transportation plan limit access to hazard areas? • Is transportation policy used to guide growth to safe locations? • Are transportation systems designed to function under disaster conditions (e.g. evacuation)? 				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	Yes	Endicott-Johnson Industrial Spine Revitalization Strategy; BOA 2018	County and Local	Broome County Planning Department and Village of Johnson City
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>This is a strategy for the Brownfield Opportunity Area (BOA) Program, to assist community-based organizations with revitalizing plans and implementation actions for areas affected by brownfield sites.</p>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan; NYS 2019 State Hazard Mitigation Plan (SHMP)	County and state	County OEM
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>NYS (2019) - This portion of the CEMP addresses the State's overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA's five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operation Plan, (2/14/2008)	County	Mayor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	State	Department of Public Works
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders.				
The PHRP will do the following:				
<ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and 				
provide an overview of the stakeholder planning group (SPG).				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				





Climate Smart Resiliency Planning

Climate Smart Resiliency Planning (CSRP) is a self-assessment tool for local decision-makers to utilize to examine the interconnected nature of land-use planning, hazard mitigation, emergency management, and resource management within a community. The CSRP Tool creates an opportunity for municipal staff to engage in a constructive conversation aimed at integrating climate considerations into local government operations. Modification of existing plans, policies, or procedures can often help a community increase efficiency in addressing the local impacts of climate change.

As part of the Village of Johnson City's Climate Smart Communities effort, the CSRP tool was used to evaluate opportunities for the Village to improve its community resilience to climate change. The evaluation was led by the Village's Director of Planning, who completed an initial review of Village planning documents and local policies and procedures. Municipal staff were engaged throughout the process of evaluating existing operations and met to specifically discuss the CSRP Tool upon its initial completion. On April 16, 2024, Village of Johnson City municipal staff gathered to discuss the Village's vulnerabilities and existing policies highlighted in the Village's draft annex to the County's HMP and evaluate the current policies in place as well as gaps that were identified in local plans, policies, and projects as they relate to community vulnerability and climate change.

The participants in this evaluation included:

- Stephanie Yezzi, CSC Task Force Member & Director of Planning, Village of Johnson City
- Joshua Holland, CSC Task Force Member & Director of Public Services, Village of Johnson City
- Randy Shear, CSC Task Force Member & Code Enforcement Officer, Village of Johnson City
- Bob Blakeslee, Fire Marshal, Village of Johnson City
- Keith McCaffery, Chief, Village of Johnson City Fire Department

Community Plan Checklist

The community plans assessed for this analysis:

- Municipal Master Plan: 2010 Unified Comprehensive Plan
- Zoning Ordinance
- Subdivision Ordinance (1993)
- Stormwater Management Plan (2022 Update)
- Multi-Hazard Mitigation Plan (current Broome County HMP)
- Flood Damage Prevention Ordinance (2011)
- Emergency Response and Short-term Recovery Plan (with Continuity of Operations component, 2022)
- Economic Development Plan: Endicott-Johnson Industrial Spine Revitalization Strategy
- Historic Preservation Plan (Downtown Historic Design Guidelines)
- Susquehanna Heritage Area Management Plan



Recommendations for Community Plans:

- Update the 2010 Unified Comprehensive Plan
- Create an Open Space Plan and Natural Resources Inventory through the CSC program as well as a Climate Action Plan.
- Develop a local Evacuation Plan
- Develop a Capital Improvements Plan

Risk and Vulnerability Assessment

The Village has a comprehensive understanding of climate hazards and their impact on the Village and is working to develop adaptation strategies through this HMP. Recommendations for enhancing knowledge of local risks and vulnerabilities include:

1. Train municipal staff on FEMA's HAZUS-MH tool
2. Document and spatially define vulnerabilities and risks. This would include mapping (potentially through a natural resource inventory) the vulnerable populations, buildings, infrastructure, natural resources, and cultural resources in the community.
3. Develop a report estimating the past and future financial losses that have/may result from riverine flooding.

Public Outreach

The Village would like to create a formalized public outreach process for flood damage prevention and mitigation. Public outreach may include the following:

- Resident emergency toolkit – Checklists for emergency supplies and evacuation procedures.
- Participatory mapping – Possibly through the comprehensive planning process, development of a natural resources inventory, or a combination of the two.
- Public information plan – This can be incorporated into an evacuation plan to include evacuation routes, bus pick-up locations, expected inundation areas, severe weather shelters, and pet shelters.

Plan Integration

Recommendations for Plan Integration:

- Update the 2010 Unified Comprehensive Plan to:
 - Cross-reference the HMP and other emergency response plans.
 - Integrate the involvement of emergency managers, floodplain managers, and public works officials into the municipal services portion of the document.
 - Complete a participatory mapping activity at a public workshop.
 - Identify resilience within its Smart Growth mission and recommend reducing vulnerabilities to multiple hazards.
 - Identify flood-prone areas and discourage development in those areas or require strategies to reduce flood damage to buildings.
 - Encourage using green infrastructure techniques to prevent flooding.



- Emphasize non-structural pre-disaster mitigation measures such as acquiring flood-prone lands and adopting No Adverse Impact floodplain regulations.
- Update local community plans to:
 - Encourage safer rebuilding in flood-prone areas, and update building codes to promote flood-resistant buildings.
 - Prioritize open space by creating local ordinances that protect wetlands, and developing a natural resources management plan or open space plan that is in coordination with the state's open space plan.
 - Develop a detailed Capital Improvements Plan.

Preparedness & Recovery

Recommendations for Preparedness & Recovery:

- Explore becoming a Storm Ready Community on the local level.
- Assess and identify local storm shelters, evacuation routes, public transportation alternatives, evacuation assistance for hospitals, nursing homes, elderly, disabled, schools, etc., through the development of a local Evacuation Plan.
- Continue coordination and communication among critical stakeholders such as community-based organizations, local businesses, local health departments, utilities, and local government leaders.
- Implement further pre and post-disaster management programs, such as educating the public on debris removal and reporting.
- The Village should explore floodplain development limits that prohibit or reduce any new encroachment and fill in river corridors.

Hazard Mitigation

Recommendations for Hazard Mitigation:

- The Village of Johnson City should explore higher regulatory standards such as raising the required freeboard above the State's 2-foot standard.
- Develop a Climate Action Plan through the Climate Smart Communities program.
- The Village should explore using tools to manage development in hazard-prone areas such as transfer of development rights or purchase of development rights, conservation overlay districts, incentive zoning for open or recreational space, protective riparian or wetland buffer ordinances, land conservation easements in hazard-prone areas, utilizing impact fees or accommodation taxes, and informing property owners of preferred shoreline protection techniques.

Development and Permitting Capability

Table 9.12-3 summarizes the capabilities of the Village of Johnson City to oversee and track development.



Table 9.12-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Department
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	If development is in the floodplain, an elevation certificate is required, and it is tracked through the CRS program.
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	There is limited space for development.

Administrative and Technical Capability

Table 9.12-4 summarizes potential staff and personnel resources available to the Village of Johnson City and their current responsibilities that contribute to hazard mitigation.

Table 9.12-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board reviews site plans for building construction, additions, rehabilitations, land partitions, change of building use, change of building tenants, and sub-divisions to ensure that the plans comply with the code and law.
Zoning Board of Adjustment	Yes	It is the function of the Board of Appeals to give applicants permission to do something contrary to the Zoning Regulations, provided the Applicant provides SUFFICIENT evidence to JUSTIFY the variance. The Board of Appeals has the legal power to issue area and use variances, and also resolve issues concerning disagreements with the decision of the Building Inspector. The Zoning Board also "interprets" the meaning of the Zoning Ordinance.
Planning Department	Yes	The Director of Planning reviews applications alongside the Code Enforcement Officer and presents materials to the Planning Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	Yes	The Planning Board reviews site plans for building construction, additions, rehabilitations, land partitions, change of building use, change of building tenants, and sub-divisions to ensure that the plans comply with the code and law.
Economic Development Commission/Committee	Yes	Broome County IDA (The Agency)
Public Works/Highway Department	Yes	The street department is responsible for the maintenance of 49.55 centerline miles of streets and five municipal parking lots.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Construction/Building/Code Enforcement Department	Yes	The village of Johnson City oversees the building codes, resources, permits, and zoning regulations.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Department of Public Works is responsible for maintenance programs within the Village.
Mutual aid agreements	Yes	With adjoining municipalities – Broome County, the Town of Dickinson, and the Town of Union.
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	Yes	Historic Review Board & Advisory Committee – Reviews projects within the Village’s downtown historic district to ensure projects meet design guidelines
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	The Planning Director heads planning; the Director of Public Services does engineering; the Code Enforcement Officer does zoning.
Engineers or professionals trained in building or infrastructure construction practices	Yes	The Director of Planning at the Village does planning; the Director of Public Services does engineering; the Code Enforcement Officer does zoning.
Planners or engineers with an understanding of natural hazards	Yes	The Director of Planning at the Village does planning; the Director of Public Services does engineering; the Code Enforcement Officer does zoning.
Staff with expertise or training in benefit/cost analysis	Yes	Village Clerk-Treasurer & Director of Public Services
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	Yes	The Planning Director does planning; the Director of Public Services does engineering
Surveyor(s)	No	The Village utilizes contractors.
Emergency Manager	Yes	The Mayor is responsible for managing emergency response decisions within the Village.





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Grant writer(s)	Yes	Community Development Administrator in the Village Planning Department responsible for grant writing and grant administration.
Resilience Officer	No	-
NFIP Floodplain Administrator (FPA)	Yes	The Village of Johnson City oversees the building codes, resources, permits, and zoning regulations. The Village Director of Planning is a CFM as well.

Fiscal Capability

Table 9.12-5 summarizes financial resources available to the Village of Johnson City.

Table 9.12-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.12-6 summarizes the education and outreach resources available to the Village of Johnson City.

Table 9.12-6. 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	-
Hazard mitigation information available on your website	Yes	-
Social media for hazard mitigation education and outreach	Yes	Through BTSC.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-



Outreach Resources	Available? (Yes/No)	Comment:
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	Yes	News Releases, Social Media, and annual outreach completed through the CRS program (i.e. repetitive loss and hazard mitigation to properties in the floodplain).

Community Classifications

Table 9.12-7 summarizes classifications for community programs available to the Village of Johnson City.

Table 9.12-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	8	2023
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	5 for residential and commercial	2011
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	2	Unknown
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	Yes	Unknown	Unknown
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other: Clean Energy Community	Yes	Unknown	Unknown

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.12-8 summarizes the adaptive capacity for each identified hazard of concern and the Village’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 9.12-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate





Hazard	Adaptive Capacity - Strong/Moderate/Weak
Wildfire	Moderate

9.12.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.12-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.12-9 summarizes the NFIP statistics for the Village of Johnson City.

Table 9.12-9. Village of Johnson City NFIP Summary of Policy and Claim Statistics

# Policies	186
# Claims (Losses)	201
Total Loss Payments	\$14,838,944
# Repetitive Loss Properties (NFIP definition)	29
# Repetitive Loss Properties (FMA definition)	8
# Severe Repetitive Loss Properties	1

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.12-10 provides a summary of the NFIP program in the Village of Johnson City.

Table 9.12-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Low-lying areas within the Village are subject to repeated flood exposure.
Do you maintain a list of properties that have been damaged by flooding?	Yes, the Village maintains a list of properties that have been damaged by flooding.





NFIP Topic	Comments
Do you maintain a list of property owners interested in flood mitigation?	During a flood event, property owners in need of rebuild or mitigation, remain in contact with code enforcement.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	The Village does not know of any interest at this time.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No, there are no current projects underway within the Village.
How do you make Substantial Damage determinations?	The Code Enforcement Official evaluates flood damage to make the determination.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	There are currently no substantial damage determinations for recent flood events.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	FEMA, NYS, and Property Insurance funded property mitigation projects within the Village.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	No, the flood maps are outdated and do not adequately show the flood-prone areas within the Village. A new study was conducted in 2010; however, the levee-protected areas were incorrectly mapped. We use the updated maps to provide recommendations though they were not formally adopted. For any NFIP requirements, the 1977 FIRMS are still in use.
NFIP Compliance	
What local department is responsible for floodplain management?	The Code Enforcement and Planning Department is responsible for floodplain management.
Are any certified floodplain managers on staff in your jurisdiction?	Yes, there are certified flood managers on staff within the Village.
Do you have access to resources to determine possible future flooding conditions from climate change?	No, the Village does not have access to resources to determine future flooding conditions.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No, there are no assistance or training needs at this time.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Village assists with permit review and inspections.
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	The Code Enforcement Officer reviews the development/construction against the building code to make the determination.
What are the barriers to running an effective NFIP program in the community, if any?	Education and outreach are the biggest barriers. Encouraging the purchase of flood insurance, and implementing higher standards for development in the floodplain. This includes education for both elected officials and residents.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No, there are no outstanding NFIP compliance violations within the Village.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	The status is unknown at this time.



NFIP Topic	Comments
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 156, Flood Damage Prevention.
What is the date that your flood damage prevention ordinance was last amended?	May 3, 2011
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	The floodplain management program for the Village meets the minimum requirements.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Chapter 237 – Storm Sewers Chapter 238 – Stormwater Management & Erosion and Sediment Control
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Village is currently enrolled in the CRS program.

9.12.5 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 9.12-11 through Table 9.12-13.

Table 9.12-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	3	0	2	5
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	2	2
Permits within SFHA	0	0	0	
2021				
Total Permits	0	0	2	2
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	3	3
Permits within SFHA	0	0	0	
2023				
Total Permits	0	0	1	1
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)



Table 9.12-12. Recent Major Development and Infrastructure from 2018 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
Oakdale Commons	Commercial	-	33-57 Harrison St	-	Ongoing renovations
UHS Revitalization	Medical	-	-	-	Ongoing renovations
JC Village Hall & DPW Facility	Government	2	60 Lester Ave	-	Renovation of Existing Buildings for Village Use - Completed

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

Table 9.12-13. 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
Oakdale Commons	Commercial	Multiple	601, 605 Harry L Dr	-	Ongoing renovations
UHS Revitalization	Medical	-	-	-	Upcoming renovations

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

9.12.6 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 Village of Johnson City’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Village are shown in Figure 9.12-1 through Figure 9.12-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Johnson City has significant exposure. The maps show the location of potential new development, where available.





Figure 9.12-1. Village of Johnson City Flood Hazard Area Extent and Location Map

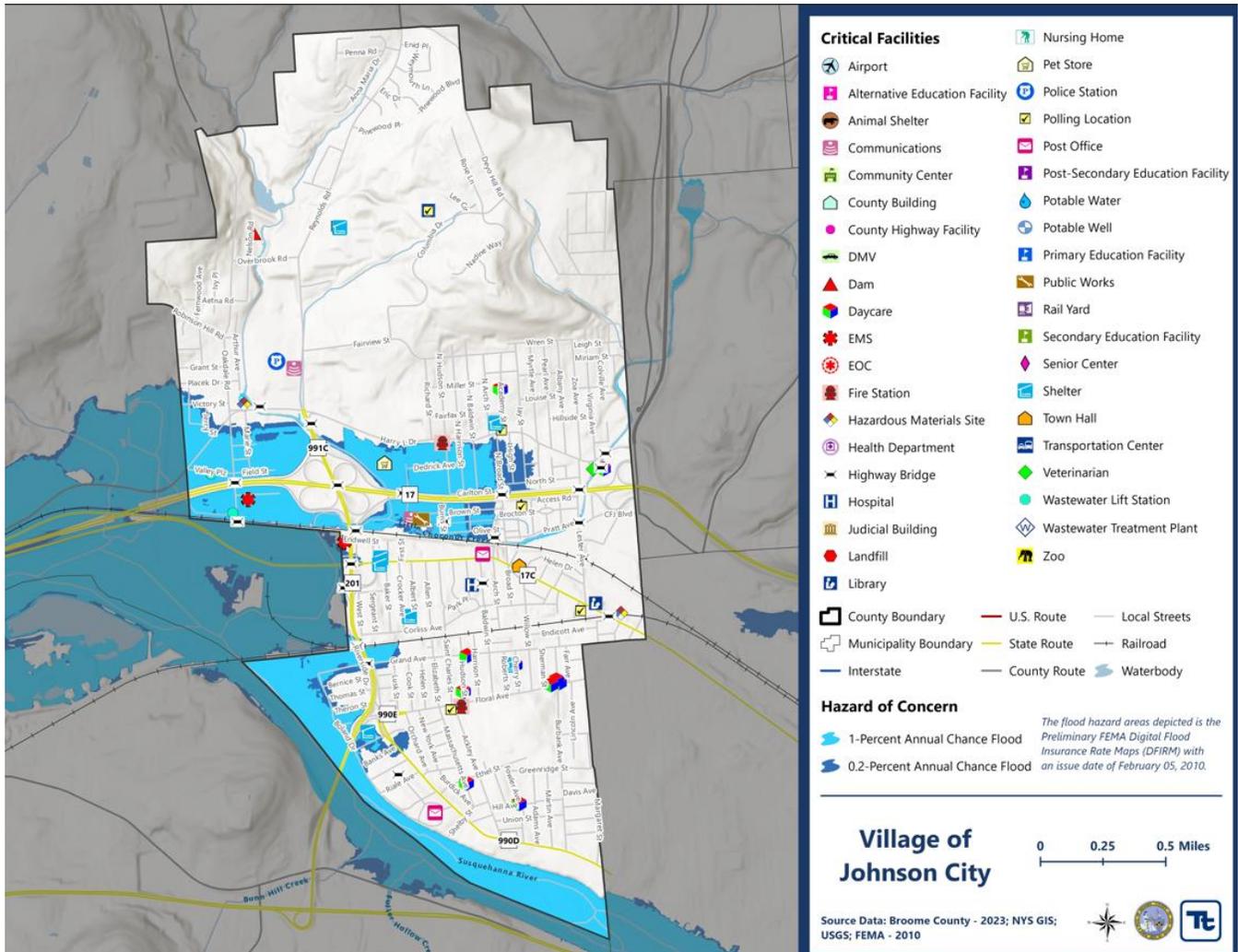
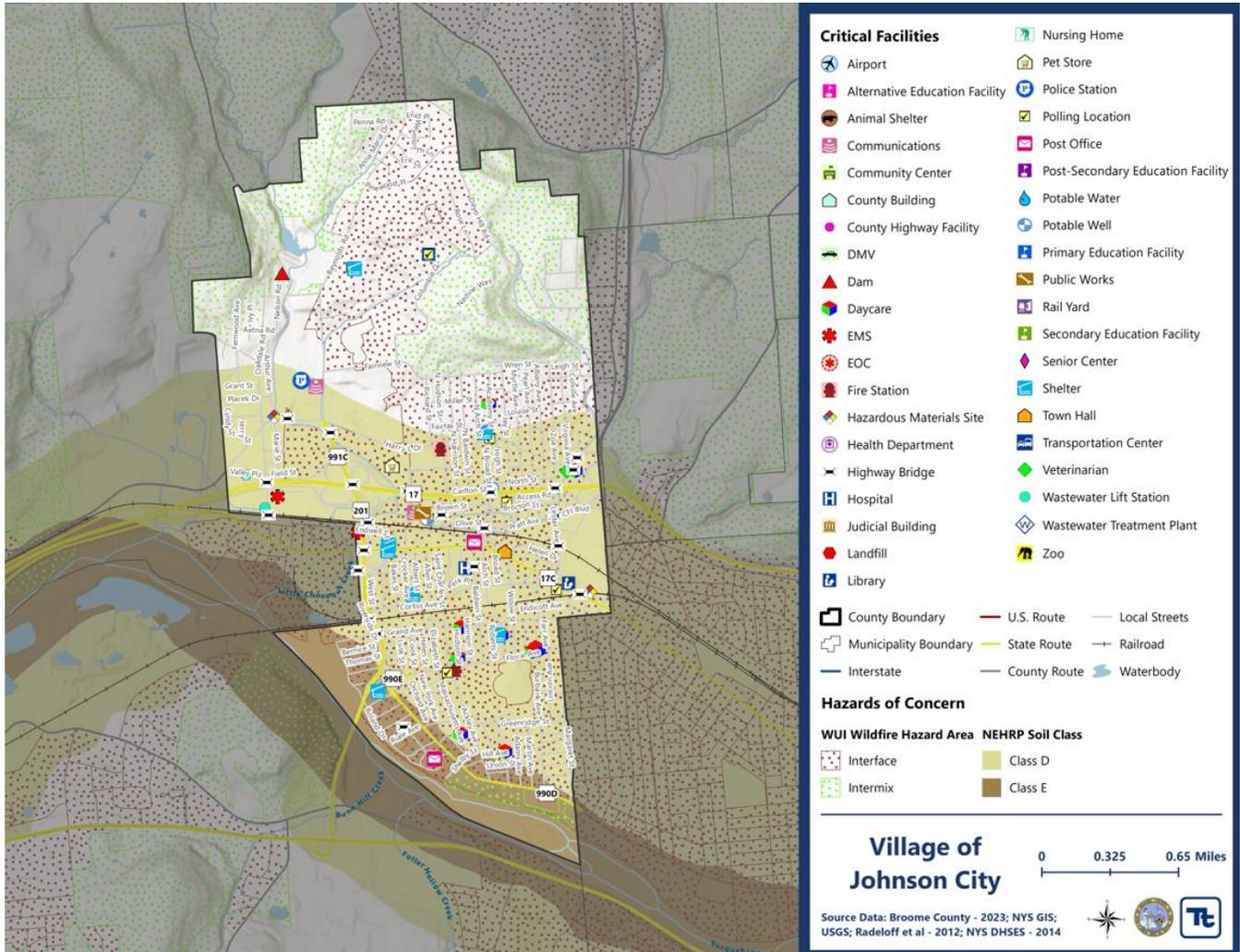




Figure 9.12-2. Village of Johnson City NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Village of Johnson City is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.12-14 provides details on loss and damage in the Village during hazard events since the last hazard mitigation plan update.

Table 9.12-14. Hazard Event History in the Village of Johnson City

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	No damages incurred by the Village of Johnson City
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	Localized flash flooding in the Village’s low-lying areas
December 2020	Severe Winter Storm	No	36” – 42” of snow accumulation in less than 24 hours	Loss of service was experienced. Roads throughout the entire Village were either closed or unpassable. Refuse collection was also delayed for two days as the Village utilized Refuse Department personnel during snow removal operations. NYS DOT crews had to be brought in to help clear roadways
7/11/2021	Flash Flood – Heavy Rain	No	Several inches of rain within 1.5 hours caused severe flash flooding in several village areas.	Leigh Street was washed out at a culvert due to heavy flows/large amounts of debris – approximately \$250,000 in damages.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Trees and powerlines were downed throughout the Village.
January 20, 2020 – May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported	Major impact on operations – The Village was subject to closures and social





Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
			60,108 reported cases and 617 reported deaths in Broome County.	distancing/masking requirements.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Village of Johnson City.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Johnson City 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 Village indicated the following:

The Village agrees with the hazard rankings in Table 9.12-15 as identified in the Hazard Ranking Meeting. Table 9.12-15 shows Johnson City’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.12-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	High
Invasive Species	Medium
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

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 9.12-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.12-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Communications_31	Communications	Yes	Yes	2024-JohnsonCityV-03	-
Speedway 7656	Hazardous Materials Facility	Yes	Yes	2024-JohnsonCityV-08	-
Oakdale Road Pump Station	Wastewater Lift Station	Yes	Yes	2024-JohnsonCityV-03	-
Valley Plaza Pump Station	Wastewater Lift Station	Yes	Yes	2024-JohnsonCityV-03	-
Superior	EMS	Yes	Yes	2024-JohnsonCityV-03	-
Petco	Pet Store	Yes	Yes	2024-JohnsonCityV-08	-
Blessed Sacrament School	Shelter	Yes	Yes	2024-JohnsonCityV-08	-
Bridge_1063179	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_1072970	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_1072980	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_2257650	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_3349840	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_7702230	Highway Bridge	Yes	Yes	-	The bridge is constructed to the 500-year flood level.
WELL #6, BURNS STREET	Potable Well	No	Yes	2024-JohnsonCityV-03	-
WELL #7, NORTH BROAD ST.	Potable Well	No	Yes	2024-JohnsonCityV-03	-
Village of Johnson City	Storage/Training Facility	No	Yes	2024-JohnsonCityV-03	-





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_1063209	Highway Bridge	No	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_1063289	Highway Bridge	No	Yes	-	The bridge is constructed to the 500-year flood level.
Bridge_2225720	Highway Bridge	No	Yes	-	The bridge is constructed to the 500-year flood level.

Source: Broome County, 2023

In addition to critical facilities that are exposed to flooding, the following high-hazard dams are located in or could impact the Village of Johnson City:

- Brandywine Creek Site 1 Dam is located in Chenango River.
- Patterson Brixius Grey Watershed 1 Dam is located in Endwell.
- Finch Hollow Site 1 Dam is located in Johnson City.
- Little Choconut Site 2e Dam is located in West Chenango.
- Finch Hollow Site 2 Dam is located in Johnson City.
- Finch Hollow Site 3c Dam is located in Trout Brook.
- Little Choconut Site 1a Dam is located in the Susquehanna River.
- Little Choconut Site 2a Dam is located in Little Choconut Creek.
- Patterson Brixius Grey Watershed 2 Dam is located in Brixius Creek.

Identified Issues

After a review of the Village of Johnson City’s hazard event history, hazard rankings, hazard location, and current capabilities, the Village of Johnson City identified the following vulnerabilities within their community:

- Stormwater issues at the Oakdale Mall.
- Flood concerns along Little Choconut Creek.
- The following critical facilities are municipal-owned and located in the floodplain:
 - Communications 31
 - Oakdale Road Pump Station
 - Valley Plaza Pump Station
 - Superior – EMS
 - Well #6
 - Well #7
 - Village of Johnson City Storage/Training Facility
 - Communications 31
 - Oakdale Road Pump Station





- Valley Plaza Pump Station
 - Superior – EMS
 - Well #6
 - Well #7
 - Village of Johnson City Storage/Training Facility
 - Communications 31
 - Oakdale Road Pump Station
 - Valley Plaza Pump Station
 - Superior – EMS
 - Well #6
- The Camden Street Water Facility has Wells 2 and 3 on site. The facility is protected with a levee, but the levee has been overtopped in two recent flooding events occurring in 2006 and 2011.
 - The current flood maps for the Village are outdated and do not adequately show the flood-prone areas within the Village. A new study was conducted in 2010; however, the levee-protected areas were incorrectly mapped. The Village uses the updated maps to provide recommendations though they were not formally adopted. For any NFIP requirements, the 1977 FIRMS are still in use.
 - Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has 29 repetitive loss properties and 1 severe repetitive loss property, but other properties may be impacted by flooding as well.
 - The following High Hazard Dams are in the Village of Johnson City or neighboring jurisdictions:
 - Brandywine Creek Site 1 Dam located in Chenango River.
 - Patterson Brixius Grey Watershed 1 Dam located in Endwell.
 - Finch Hollow Site 1 Dam located in Johnson City.
 - Little Choconut Site 2e Dam Located in West Chenango.
 - Finch Hollow Site 2 Dam located in Johnson City.
 - Finch Hollow Site 3c Dam located in Trout Brook.
 - Little Choconut Site 1a Dam located in Susquehanna River.
 - Little Choconut Site 2a Dam located in Little Choconut Creek.
 - Patterson Brixius Grey Watershed 2 Dam located in Brixius Creek.
 - The following privately owned critical facilities are located in the floodplain:
 - Blessed Sacrament School
 - Petco
 - Speedway 7656



9.12.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.12-17 indicates progress on the Village'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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.12-17, the Village of Johnson City identified the following mitigation efforts completed since the last HMP:

- A feasibility study has been completed (October 2018) to relocate the Johnson City DPW facility. The primary recommendation was to rebuild offsite outside of the flood zone. The secondary was to floodproof the facility.
- Properties that have been submitted for acquisition:
 - 29 River Terrace
 - 28 N. Harrison Street
 - 16 N. Baldwin Street
- DPW Complex Relocation for resiliency purposes.
- Updates to the Floodplain Management Plan.
- Installation of separate stormwater lines to eliminate flooding on Helen Drive.
- Installation of underground stormwater storage units at Johnson City School District Athletic Field and Village Park.
- Since the adoption of the County's first HMP, the Village of Johnson City has made significant mitigation progress in the following areas:
 - Continued participation in the FEMA Buyout Program.
 - Stormwater Management Improvements.



Table 9.12-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Johnson City Village-1	Continue to participate in the FEMA Buyout Program.	Flood	Village of Johnson City Mayor's Office	Currently, properties that have been submitted for acquisition: are 29 River Terrace, 28 N. Harrison Street. 16 N Baldwin Street.	1. Completed. 2. N/A	1. Discontinue. 2. N/A 3. Completed.
Johnson City Village-2	DPW Complex Resiliency Improvements	Flood, Severe Storm	Village DPW	Relocate the DPW's administration offices and employee locker room to a second story that would be located above the base flood elevation. The project also would construct a new 3,000-square-foot maintenance building and a 13,041-square-foot garage for the village's vehicles	1. Completed. 2. N/A	1. Discontinue. 2. N/A 3. Completed.
Johnson City Village-3	Install storm water pump station at the Camden Street Water Facility	Flood	Village DPW	A stormwater pump station will be installed at the Camden Street water Facility and protected to the 500-year flood level.	1. No Progress. 2. This action is no longer needed.	1. Discontinue. 2. N/A 3. This action is no longer an initiative for the Village.
Johnson City Village-4	Protect Oakdale Road Pump station to the 500-year flood level.	Flood	Village Facilities manager	The Village will floodproof the Oakdale Road pump station	1. No Progress. 2. This action is no longer needed.	1. Discontinue. 2. N/A 3. This action is no longer an initiative for the Village.
Johnson City Village-5	Protect the Superior EMS Station from the 500-year flood level.	Flood	Village Floodplain Administrator	The Village will contact the facility manager to notify them of their status within the 100-year floodplain and provide potential mitigation actions.	1. No Progress. 2. This action is no longer needed.	1. Discontinue. 2. N/A 3. This action is no longer an initiative for the Village.
Johnson City Village-6	Protect the Blessed Sacrament School/Davis Bible College from the 500-year flood level.	Flood	Village Floodplain Administrator	The Village will contact the facility manager to notify them of their status within the 100-year floodplain and provide potential mitigation actions	1. No Progress. 2. This action is no longer needed.	1. Discontinue. 2. N/A 3. This action is no longer an initiative for the Village.
Johnson City Village-7	Update the Town's Floodplain Management Plan and incorporate the Villages of Endicott and	Flood	Village P&CD; DPW	The floodplain development ordinance will also be revised as part of this project. The new plan will also make recommendations for improving the	1. Ongoing capability. 2. No current challenges or obstacles.	1. Discontinue. 2. N/A 3. This is an ongoing capability when needed.



SECTION 9.12. Village of Johnson City

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Johnson City into the new plan.			Town's Floodplain Development Ordinance.		
Johnson City Village-8	Oakdale Mall Rehabilitation	Flood, Severe Storm	Village Engineer, Village Board	This project presents a long-term, visionary concept of how the Oakdale Mall could be retrofitted with green infrastructure techniques and best management practices for stormwater management. The mall building's flat roof would be modified to a green roof to retain and slow stormwater during rain events, reduce the burden on the stormwater system, and reduce energy costs by absorbing heat. A second alternative would use solar technology on the roof to reduce energy consumption from the power grid and may offset a percentage of the building's retrofit costs. Portions of the parking area surrounding the mall would be reconstructed and re-graded to redirect stormwater into rain gardens and bio-swales. These features would promote infiltration, improve water quality, and reduce runoff. The large, underutilized asphalt parking lots would be replaced by grass parking surfaces.	1. In Progress 2. Infrastructure is being updated as the Mall Site is "redeveloped"	1. Keep in the 2024 HMP. 2. This project presents a long-term, visionary concept of how the Oakdale Mall could be retrofitted with green infrastructure techniques and best management practices for stormwater management. The mall building's flat roof would be modified to a green roof to retain and slow stormwater during rain events, reduce the burden on the stormwater system, and reduce energy costs by absorbing heat. A second alternative would use solar technology on the roof to reduce energy consumption from the power grid and may offset a percentage of the building's retrofit costs. Portions of the parking area surrounding the mall would be reconstructed and re-graded to redirect stormwater into rain gardens and bio-swales. These features would promote infiltration, improve water quality, and reduce runoff. The large, underutilized asphalt parking lots would be replaced by grass parking surfaces. 3. N/A
Johnson City Village-9	Cloverleaf Bio-Retention / Flood Mitigation	Flood, Severe Storm	Town of Union Engineer and Village of Johnson City Engineer	This project presents a long-term, visionary design for bio-retention measures that would expand the floodplain of Little Choconut Creek using undeveloped and underutilized land. The pockets of land within the adjacent cloverleaf interchange of Route 201 and Route 17 would provide a series of inter-connected bio-retention areas to expand the creek's floodplain and provide additional flood storage	1. No Progress 2. Challenges with funding and staff availability.	1. Keep in the 2024 HMP. 2. This project presents a long-term, visionary design for bio-retention measures that would expand the floodplain of Little Choconut Creek using undeveloped and underutilized land. The pockets of land within the adjacent cloverleaf interchange of Route 201 and Route 17 would provide a series of inter-connected bio-retention areas to expand the creek's floodplain and provide additional flood storage. 3. N/A



SECTION 9.12. Village of Johnson City

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Johnson City Village-10	Finch Hollow County Retention Facility #1	Flood, Severe Storm	Village Sewer Department and Engineer, Broome County	Remove accumulated sediment that affects the capacity of the stormwater retention facility	1. No progress. 2. This action is no longer needed.	1. Discontinue. 2. N/A 3. This action is no longer an initiative for the Village.
Johnson City Village-11	Helen Drive Sewer Separation	Flood, Severe Storm	Village Sewer Department and Engineer	Separate stormwater lines from the sanitary sewer system to eliminate flooding of Helen Drive. The Village will also undertake water line improvements, curbing, and new pavement.	1. Completed 2. N/A	1. Discontinue. 2. N/A 3. Completed.
Johnson City Village-12	Stormwater Detention			Install underground stormwater storage units at Johnson City School District athletic fields and Village Park.	1. Completed 2. N/A	1. Discontinue. 2. N/A 3. Completed.



Proposed Hazard Mitigation Initiatives for the HMP Update

Johnson City participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Johnson City 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 the Village’s priorities.

Table 9.12-18 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. Table 9.12-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.12-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	X		X	X		X		X	
Disease Outbreak	X						X			
Drought	X						X			
Earthquake	X						X			
Extreme Temperature	X						X			
Flood	X	X		X	X	X	X		X	X
Invasive and Nuisance Species	X						X			
Severe Storm	X	X		X	X	X	X		X	X
Severe Winter Storm	X						X			
Wildfire	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 stormwater 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 9.12-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-JohnsonCityV-01	Oakdale Mall Rehabilitation	1	1	0	1	0	0	0	1	1	1	1	1	1	1	10	Medium
2024-JohnsonCityV - 02	Cloverleaf Bio-Retention / Flood Mitigation	1	1	0	1	0	0	0	1	1	1	1	1	1	1	10	Medium
2024-JohnsonCityV - 03	Critical Facilities in Floodplain	1	1	1	1	1	0	1	0	1	1	1	1	1	1	12	High
2024-JohnsonCityV - 04	Levee Upgrades	1	1	1	1	0	0	1	1	0	1	1	1	1	1	11	High
2024-JohnsonCityV - 05	FIRM Updates	1	1	1	1	1	1	1	0	0	1	0	1	1	1	11	High
2024-JohnsonCityV - 06	Repetitive Loss and Severe Repetitive Loss Properties	1	1	1	1	1	0	1	0	1	1	1	1	1	1	12	High
2024-JohnsonCityV - 07	Outreach to High Hazard Dam Facilities	1	1	1	1	1	0	1	1	0	1	1	1	1	1	12	High
2024-JohnsonCityV - 08	Privately Owned Critical Facilities in Floodplain	1	1	1	1	1	0	1	1	0	1	1	1	1	1	12	High

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



Action 2024-JohnsonCityV-01. Oakdale Mall Rehabilitation

Action Name:	2024-JohnsonCityV-01 (prev. Johnson City Village -8)		
Description of the Problem:	Stormwater issues at the Oakdale Mall.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	<p>This project presents a long-term, visionary concept of how the Oakdale Mall could be retrofitted with green infrastructure techniques and best management practices for stormwater management. The mall building’s flat roof would be modified to a green roof to retain and slow stormwater during rain events, reduce the burden on the stormwater system, and reduce energy costs by absorbing heat. A second alternative would use solar technology on the roof to reduce energy consumption from the power grid and may offset a percentage of the building’s retrofit costs. Portions of the parking area surrounding the mall would be reconstructed and re-graded to redirect stormwater into rain gardens and bio-swales. These features would promote infiltration, improve water quality, and reduce runoff. The large, underutilized asphalt parking lots would be replaced by grass parking services.</p>		
Lead Agency:	Village Engineer, Village Board		
Supporting Agencies:	N/A		
Estimated Cost:	High (> \$100,000)		
Potential Funding Sources:	NY Rising, CDBG, HMGP, PDM, Municipal Budget		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 3, 5		
Benefits:	Increase the holding capacity of stormwater retention facility to reduce flood and erosion risks		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action ensures the safety of residents and visitors who utilize this community facility.		
Impact on Critical Facilities/Lifelines:	This action maintains the Mall as a community center and shelter during flooding events.		
Impact of Capabilities:	This action ensures that the mall parking lot can be accessible for EMS and first responders during flooding events.		
Impact on Future Development:	N/A		
Climate Change Considerations:	This action will take into account climate change impacts to increase flood frequency and severity.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low





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Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Relocate the mall and parking lot	Not feasible, not an option, and not enough space for redevelopment.
	Remove the Mall	Not an option.





Action 2024-JohnsonCityV-02. Cloverleaf Bio-Retention / Flood Mitigation

Action Name:	2024-JohnsonCityV-02 (prev. Johnson City Village -9)		
Description of the Problem:	Flood concerns along Little Choconut Creek		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	This project presents a long-term, visionary design for bio-retention measures that would expand the floodplain of Little Choconut Creek using undeveloped and underutilized land. The pockets of land within the adjacent cloverleaf interchange of Route 201 and Route 17 would provide a series of inter-connected bio-retention areas to expand the creek's floodplain and provide additional flood storage.		
Lead Agency:	Town of Union Engineer and Village of Johnson City Engineer		
Supporting Agencies:	N/A		
Estimated Cost:	High (> \$100,000)		
Potential Funding Sources:	NY Rising, CDBG, HMGP, PDM, Municipal Budget		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 5		
Benefits:	Increased holding capacity will reduce flood risk to surrounding properties.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action would protect residents who reside in or around Little Choconut Creek from flooding damage.		
Impact on Critical Facilities/Lifelines:	This action would ensure critical facilities or lifelines, such as evacuation routes, are protected during a flood event.		
Impact of Capabilities:	This action maintains the standards of operation for EMS and first responders by allowing access to residents near Little Choconut Creek during a severe flood event.		
Impact on Future Development:	This action would protect future development in or around Little Choconut Creek.		
Climate Change Considerations:	This action takes into consideration climate change impacts on the severity and frequency of flood events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Build a levee		Not environmentally feasible.
	Build a dam		Environmentally damaging, and costly.





Action 2024-JohnsonCityV-03. Municipal-Owned Critical Facilities in Floodplain

Action Name:	2024-JohnsonCityV-03	
Description of the Problem:	<p>The following critical facilities are municipal-owned and located in the floodplain:</p> <ul style="list-style-type: none"> - Communications 31 - Oakdale Road Pump Station - Valley Plaza Pump Station - Superior – EMS - Well #6 - Well #7 - Village of Johnson City Storage/Training Facility - Communications 31 - Oakdale Road Pump Station - Valley Plaza Pump Station - Superior – EMS - Well #6 - Well #7 - Village of Johnson City Storage/Training Facility - Communications 31 - Oakdale Road Pump Station - Valley Plaza Pump Station - Superior – EMS - Well #6 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will conduct outreach to property owners for those facilities privately owned and explore mitigation strategies to protect these critical facilities from flood events.	
Lead Agency:	Village floodplain manager	
Supporting Agencies:	N/A	
Estimated Cost:	Medium (\$10,000 > \$500,000)	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	
Implementation Timeline:	Medium (> 5 years)	
Goals Met:	1, 2	
Benefits:	Ensures continuity of operations for critical facilities.	





Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	
Impact on Critical Facilities/Lifelines:	This action will protect critical facilities, maintaining the critical services that they provide.	
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.	
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.	
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Relocate facility	Relocation is expensive and results in the loss or delay of critical services in the immediate area.
	Establish plans to enter into an MOU with neighboring critical facilities to provide service during flood events.	Reduction in response times and delay of critical services in the immediate area.



Action 2024-JohnsonCityV-04. Levee Upgrades

Action Name:	2024-JohnsonCityV-04		
Description of the Problem:	The Camden Street Water Facility has Wells 2 and 3 on site. The facility is protected with a levee, but the levee has been overtopped in two recent flooding events occurring in 2006 and 2011.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Village will conduct a levee risk assessment and explore funding opportunities to upgrade the levee to prevent overtopping during flood events and ensure the protection of Wells #2 and #3.		
Lead Agency:	Village Engineer		
Supporting Agencies:	N/A		
Estimated Cost:	Medium (\$10,000 > \$500,000)		
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget		
Implementation Timeline:	Medium (> 5 years)		
Goals Met:	1, 2		
Benefits:	Ensures the continuity of operations for critical assets.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Upgrades to the levee allow for flood protection for residents in the area.		
Impact on Critical Facilities/Lifelines:	This action ensures the continuity of operation for two well systems during flood events.		
Impact of Capabilities:	Upgrades to the levee systems ensure flood protection capabilities in the Village are restored.		
Impact on Future Development:	This action protects future development in and around the levee system. It also ensures services for the wells to these structures are maintained.		
Climate Change Considerations:	This action takes into consideration climate change impacts on the severity and frequency of flood events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Remove levee		Problem exemplified, not feasible.
	Relocate wells		Not feasible, not an option.





Action 2024-JohnsonCityV-05. FIRM Updates

Action Name:	2024-JohnsonCityV-05		
Description of the Problem:	The current flood maps for the Village are outdated and do not adequately show the flood-prone areas within the Village. A new study was conducted in 2010; however, the levee-protected areas were incorrectly mapped. The Village uses the updated maps to provide recommendations though they were not formally adopted. For any NFIP requirements, the 1977 FIRMS are still in use.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	Work with FEMA to determine the status of PFIRMS and move toward adoption.		
Lead Agency:	Village Board		
Supporting Agencies:	FEMA		
Estimated Cost:	Low		
Potential Funding Sources:	Municipal Budget		
Implementation Timeline:	Short		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	Updated maps that adequately address flooding within the community		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	PFIRMS which are adopted by FEMA will be used to safely plan and prepare for areas of increased flooding in order to protect all community members from impacts.		
Impact on Critical Facilities/Lifelines:	Updated PFIRMS can be used to identify the areas of most concern and protect critical facilities located within or nearby those areas.		
Impact of Capabilities:	This action will enhance the Village’s capabilities by providing updated flood maps for planning and preparedness purposes.		
Impact on Future Development:	Updated flood maps will be helpful to ensure safe build-out of future development within the Town, away from flooded areas.		
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for planners and emergency managers.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Use outdated flood maps adopted by FEMA already		They are not accurate, outdated, and the problem persists
	Use maps without FEMA adoption.		Lack of collaboration.





Action 2024-JohnsonCityV-06. Repetitive Loss and Severe Repetitive Loss Properties

Action Name:	2024-JohnsonCityV-06	
Description of the Problem:	Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has 29 repetitive loss properties and 1 severe repetitive loss property, but other properties may be impacted by flooding as well.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Conduct outreach to 29 flood-prone property owners, including RL/SRL property owners, 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 flood-prone areas that experience frequent flooding (high-risk areas).	
Lead Agency:	Village Board	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	BRIC, FMA, HMGP, match from property owners	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	Eliminates flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Collecting data regarding homeowners who reside within flood-prone areas provides an opportunity to introduce location-specific opportunities for assistance.	
Impact on Critical Facilities/Lifelines:	Outreach conducted to increase the removal of structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	Outreach which promotes the removal of risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed.	
Impact on Future Development:	Increased outreach to homeowners within a flood-prone area will limit construction in areas that are prone to hazard events.	
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.	





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Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	Do nothing.	Problem persists.	
	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 2024-JohnsonCityV-07. Outreach to High-Hazard Dam Facilities

Action Name:	2024-JohnsonCityV-07		
Description of the Problem:	<p>The following High Hazard Dams are in the Village of Johnson City or neighboring jurisdictions:</p> <ul style="list-style-type: none"> • Brandywine Creek Site 1 Dam located in Chenango River. • Patterson Brixius Grey Watershed 1 Dam located in Endwell. • Finch Hollow Site 1 Dam located in Johnson City. • Little Choconut Site 2e Dam Located in West Chenango. • Finch Hollow Site 2 Dam located in Johnson City. • Finch Hollow Site 3c Dam located in Trout Brook. • Little Choconut Site 1a Dam located in Susquehanna River. • Little Choconut Site 2a Dam located in Little Choconut Creek. • Patterson Brixius Grey Watershed 2 Dam located in Brixius Creek. 		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Village will conduct outreach to inform owners of the high-hazard dams of risk and possible mitigation actions to protect against dam failure.		
Lead Agency:	Village Department of Public Works		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Municipal Budget		
Implementation Timeline:	Short		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	High-hazard dam owners will be better educated on the risk of dam failure and be aware of possible mitigation actions to pursue.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Outreach to high-hazard dam owners will reduce flood risk to the community, by promoting mitigation actions to protect against dam failure.		
Impact on Critical Facilities/Lifelines:	This action will promote education and resources for safe and operable dams near the Town, which are a critical facility.		
Impact of Capabilities:	This action will ensure the most current data and resources are available for high-hazard dam owners in and around the Town.		
Impact on Future Development:	This action will protect future development in and around the high-hazard dams.		
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for high-hazard dam owners.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





SECTION 9.12. Village of Johnson City

Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Remove dams	Not an option, costly.
	Relocate residents	Not an option, costly.





Action 2024-JohnsonCityV-08. Privately Owned Critical Facilities in Floodplain

Action Name:	2024-JohnsonCityV-08	
Description of the Problem:	The following privately owned critical facilities are located in the floodplain: Blessed Sacrament School Petco Speedway 7656	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village Department of Public Works will conduct public outreach to property owners on flood mitigation and funding opportunities.	
Lead Agency:	Village, Department of Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short (< 5 years).	
Goals Met:	1, 2	
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in better-informed facility managers of critical facilities that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Critical facilities are inoperable during flood events.



SECTION 9.12. Village of Johnson City

	Rain gardens.	Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers	Requires deployment, short-term solution.





Action 2024-JohnsonCityV-09. Socially Vulnerable Population Outreach

Action Name:	2024-JohnsonCityV-09	
Description of the Problem:	The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Village will improve public awareness of hazards, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website.	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget, HMGP	
Implementation Timeline:	Short (< 3 years).	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	
Impact on Critical Facilities/Lifelines:	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.	
Impact of Capabilities:	This action would build upon the Town's already existing public education and outreach program.	
Impact on Future Development:	N/A	
Climate Change Considerations:	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.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No Action.	-	
	Rely on state or federal resources.	-	
	Use only a few methods for distribution.	-	



SECTION 9.

9.13 TOWN OF KIRKWOOD

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

9.13.1 Hazard Mitigation Planning Team

The Town of Kirkwood identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.13-1 Volume 1 summarizes Town officials who participated in the development of the annex and in what capacity. It also includes additional documentation of the Town’s planning activities through Planning Partnership meetings.

Table 9.13-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Lew Grubham Address: 70 CRESCENT DRIVE KIRKWOOD, NY 13795 Phone Number: 607-775-1370 Email: lgrubham@townofkirkwood.org	Name/Title: Katie Legg Address: 70 CRESCENT DRIVE KIRKWOOD, NY 13795 Phone Number: 607-775-1370 Email: katie@townofkirkwood.org
NFIP Floodplain Administrator	
Name/Title: Lew Grubham Address: 70 CRESCENT DRIVE KIRKWOOD, NY 13795 Phone Number: 607-775-1370 Email: lgrubham@townofkirkwood.org	
Additional Contributors	
Name/Title: John Mastronardi, Griffiths Engineering Method of Participation: Steering Committee KO Meeting, Planning Partnership KO Meeting	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	



9.13.2 Municipal Profile

The Town of Kirkwood is located in the south-central part of Broome County, NY. The Town of Kirkwood has a total area of 31.2 square miles. The Town is located in the south-central part of Broome County and shares a border with the State of Pennsylvania to the South. The Town also shares borders with the City of Binghamton to the West, the Town of Fenton to the North, the Town of Colesville to the Northeast, and the Town of Windsor and the Town of Conklin to the Southeast. The Susquehanna River forms the western border and New York State Route 17 passes across the northern part of the Town. The Town of Kirkwood includes the hamlets of Riverside, Kirkwood Village, Langdon, Kirkwood Centre, and Brookvale. Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Kirkwood is governed by a Supervisor and Town Council (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Kirkwood was 5,481, a 6.4 percent decrease from the 2010 Census.

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 2020 U.S. Census American Community Survey indicates that 2.1 percent of the population is 5 years of age or younger, 19.1 percent is 65 years of age or older, 1.1 percent is non-English speaking, 14.0 percent is below the poverty threshold, and 13.4 percent is considered disabled.

9.13.3 Jurisdictional Capability Assessment and Integration

The Town of Kirkwood 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their



progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Kirkwood to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.13-2 summarizes the planning and regulatory tools that are available to the Town of Kirkwood. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.13-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 2200, LL #3-2023 Page 2201, July 1985 Building Code of New York State (2020)	State and Local	Code Enforcement Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Chapter 2200 provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in the Town of Kirkwood ("Town"). This chapter is adopted pursuant to Section 10 of the Municipal Home Rule Law. Except as otherwise provided in the Uniform Code, the Energy Code, or other state law, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this chapter.</p> <p>The NYS Building Code is intended to establish provisions that adequately protect public health, safety, and welfare through the minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The 2020 edition is an update to the 2018 edition published by the ICC. It is part of the Uniform Fire Prevention and Building Code.</p>				
Zoning/Land Use Code	Yes	Zoning LL, Page 7001, November 1986	Local	Code Enforcement Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this Zoning Local law is to guide the future growth and development of the Town of Kirkwood in accordance with a comprehensive plan of land use and population distribution.</p> <ul style="list-style-type: none"> A. It represents and promotes beneficial and convenient relationships among residential, agricultural, business, industrial development, planned development, aquifer protection, mining, and public areas within the Town. B. It considers the suitability of each area for such uses as indicated by existing conditions, trends in population and mode of living, and future needs for various types of land development. C. It strives to promote the health, safety, and general welfare of the inhabitants of the community. D. It promotes the effective and efficient use of the Town's wind energy resource and regulates the placement, siting, and installation of wind turbines. 				
Subdivision Code	Yes	Subdivision Regulations, Page 5001, October 1, 1963	Local	Code Enforcement Office
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The subdivision regulations include basic procedural requirements, pre-application procedure, final subdivision plat, and subdivision standards, for the Town of Kirkwood.</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>General standards include, but are not limited to:</p> <ul style="list-style-type: none"> - The proposed subdivision shall conform to the Official Map, the Zoning Ordinance, and the Master Plan, if such exist. - In case a tract is subdivided into larger parcels shall be arranged to allow the opening of future streets and logical further subdivisions. - Adequate storm drainage systems shall be required in all new subdivisions. - The subdivision design shall encourage the preservation of existing trees. 				
Site Plan Code	Yes	Zoning LL #6-2022, Section 502, page 7062, September 6, 2022	Local and County	Code Enforcement Office/Engineer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>SITE PLAN — A plan of a lot or subdivision on which it shows topography, location of all buildings, structures, roads, rights-of-way, boundaries, all essential dimensions and bearings, and any other information deemed necessary by the Code Enforcement Officer or the Planning Board.</p> <p>SITE PLAN REVIEW — Authority delegated to the Planning Board by the Board of Trustees or Town Board which enables the Planning Board to approve, approve with conditions, or disapprove the site development plans for all buildings or uses where site plan review is required.</p> <p>A Site Plan review is now required in all changes of ownership of a business and/or type of business. The following steps MUST be followed for the Site Plan review to be completed:</p> <ul style="list-style-type: none"> ▪ A completed site plan application* ▪ A completed Environmental Assessment form* ▪ A Site Plan showing the location of the building(s), driveway(s), parking, maneuvering area, location of utilities, lighting, and signs ▪ Preliminary architectural plans showing the interior floor plan, the use, and the elevation of building(s) ▪ If regarding a plan for grading, drainage, and erosion control with analysis of controlling surface water runoff; elevation of finished grades must be shown 				
Stormwater Management Code	Yes	Stormwater Management and Erosion & Sediment Control, LL #7, Page 4861, August 7, 2007	Local	Code Enforcement Office/Engineer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in Section 1 hereof. This local law seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> - Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised; - Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; - Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the the integrity of stream channels; - Minimize increases in pollution caused by stormwater runoff from land development activities, which would otherwise degrade local water quality; - Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and - Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, 				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Flood Damage Prevention LL #11, Page 2303, October 7, 2003	Federal, State, County, and Local	Code Enforcement Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this local law to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: 1. Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities; 2. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction; 3. Control the alteration of natural flood plains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters; 4. Control filling, grading, dredging, and other development which may increase erosion or flood damages; 5. Regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands, and; 6. Qualify and maintain for participation in the National Flood Insurance Program.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	NYS Residential Code (2010); R324.1.3.3 Freeboard	Local	Code Enforcement Office





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>A freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified. A freeboard shall not be required where it is not possible to obtain a design flood elevation from the FIRM or any method established above and the design flood elevation is three feet above the highest adjacent grade.</p>				
Planning Documents				
General/Comprehensive Plan	Yes	Town of Kirkwood Comprehensive Plan (2016)	Local	Comprehensive Plan Committee
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Town of Kirkwood Comprehensive Plan is intended to become a guide for future growth, development, and conservation. The comprehensive plan committee encouraged citizens to provide their perspectives and offer insight into the current conditions and issues facing the Town. Public input was also used to develop goals and recommendations that reflect the consensus of the community. Once adopted, future laws and decisions have to be consistent with the recommendations set forth in this plan. The 2016 Kirkwood Comprehensive Plan updates the Town's previous comprehensive plan, completed in 2002. This plan was drafted by a special board that worked closely with the Broome County Department of Planning.</p>				
Capital Improvement Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Disaster Debris Management Plan	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Floodplain Management or Watershed Plan	Yes	Page 2341, April 4, 2006	Local	Code Enforcement Office/Engineer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Floodplain Management reduces the risks and impacts of flooding on the Town.</p>				
Stormwater Management Plan	Yes	Stormwater Management and Erosion & Sediment Control, LL #7, Page 4861, August 7, 2007	Local	Code Enforcement Office/Engineer
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in Section 1 hereof. This local law seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> -Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02 or as amended or revised; -Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised; -Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the the integrity of stream channels; -Minimize increases in pollution caused by stormwater runoff from land development activities, which would otherwise degrade local water quality; -Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and -Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety. 				





SECTION 9.13. Town of Kirkwood

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Open Space Plan	Yes	Open space strategy	Local or County	Code Enforcement Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Town maintains open space through the HMGP process. All acquired properties through the HMGP process are required to forever remain undeveloped open space.				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Emergency Preparedness Plan LL #2, September 3, 1991 (amended October 2, 2007); NYS 2019 State Hazard Mitigation Plan (SHMP)	Local and State	Code Enforcement Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
NYS (2019) - This portion of the CEMP addresses the State's overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA's five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operation Plan, February 14, 2008.	Local or County	Code Enforcement Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders.</p> <p>The PHRP will do the following:</p> <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and provide an overview of the stakeholder planning group (SPG). 				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.13-3 below summarizes the capabilities of the Town of Kirkwood to oversee and track development.





Table 9.13-3. Development and Permitting Capability

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

Administrative and Technical Capability

Table 9.13-4 summarizes potential staff and personnel resources available to the Town of Kirkwood and their current responsibilities that contribute to hazard mitigation.

Table 9.13-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board is comprised of Town of Kirkwood residents appointed by the Kirkwood Town Board. The main duty of the Planning Board is to give recommendations regarding zoning referrals within the Town. The Planning Board also conducts site plan reviews, approves subdivision plots within the Town, and takes part in approving almost all other developments within the Town of Kirkwood. While rendering approvals and recommendations the Planning Board weighs the community’s goals, desires, and policies heavily in order to provide the best for the Town and its residents.
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Highway Department is responsible for the regular maintenance of Town roads including, surface repair and sweeping, cleaning ditches, setting driveway sluice pipes, and maintaining signs.
Construction/Building/Code Enforcement Department	Yes	The main duty of the Town Building and Code Enforcement Office is to make sure that all residents and future residents of the Town are adhering to the rules set forth by both state and





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		town law. This includes fire inspection, building permits, and property maintenance laws.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Department Programs
Mutual aid agreements	Yes	Agreement with Neighboring Towns
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering Services through consultant upon retainer Contract - Griffiths Engineering, LLC 13 S. Washington Street Binghamton, NY 13903
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering Services through consultant upon retainer Contract - Griffiths Engineering, LLC 13 S. Washington Street Binghamton, NY 13903
Planners or engineers with an understanding of natural hazards	Yes	Engineering Services through consultant upon retainer Contract - Griffiths Engineering, LLC 13 S. Washington Street Binghamton, NY 13903
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	The Supervisor is the treasurer of the Town, responsible for presenting an annual budget to the Town Board and the taxpayers within the Town. He chairs all the Town Board public meetings and is considered the leader of the Town; responsible for coordinating all town functions such as highway, public works, parks, budgeting, etc., while not directly involved in the management of highway, public works, and parks. The Town Supervisor is the liaison with other towns, communities, the county, and the state for Kirkwood. The Supervisor creates committees and assigns Town Board members to chair and participate in these committees. As Supervisor he is a consulting member of each of these committees.





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Grant writer(s)	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

Fiscal Capability

Table 9.13-5 summarizes financial resources available to the Town of Kirkwood.

Table 9.13-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.13-6 summarizes the education and outreach resources available to the Town of Kirkwood.

Table 9.13-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Facebook
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	Yes	Electronic Sign Board within the Town. Newsletter.



Community Classifications

Table 9.13-7 summarizes classifications for community programs available to the Town of Kirkwood.

Table 9.13-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.13-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.13-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate



9.13.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.13-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.13-9 summarizes the NFIP statistics for the Town of Kirkwood.

Table 9.13-9. Town of Kirkwood NFIP Summary of Policy and Claim Statistics

# Policies	55
# Claims (Losses)	220
Total Loss Payments	\$8,349,045
# Repetitive Loss Properties (NFIP definition)	38
# Repetitive Loss Properties (FMA definition)	7
# Severe Repetitive Loss Properties	10

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.13-10 provides a summary of the NFIP program in the Town of Kirkwood.

Table 9.13-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Flood-prone areas are currently mapped on FEMA FIRM’s and Broome County GIS.
Do you maintain a list of properties that have been damaged by flooding?	Damaged areas documented on maps from FEMA and the County
Do you maintain a list of property owners interested in flood mitigation?	After flood events, the Town will maintain a list of owners interested in flood mitigation.





NFIP Topic	Comments
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown, at this time.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	None at this time.
How do you make Substantial Damage determinations?	Substantial Damage determinations are made based on comparing the structures' Fair Market Value vs. estimated damages received during a flood event. Estimated damages come in the form of an engineer/code officer's opinion of probable cost of repair or from contractors estimate.
How many were declared for recent flood events in your jurisdiction?	Unknown, at this time.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	Unknown, at this time.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	No. FEMA Preliminary Mapping more accurately addresses flood risk within the Town however these maps were never formally approved and/or adopted.
NFIP Compliance	
What local department is responsible for floodplain management?	The Code Enforcement Office is responsible for floodplain management within the Town.
Are any certified floodplain managers on staff in your jurisdiction?	Yes, there are certified floodplain managers on staff within the Town.
Do you have access to resources to determine possible future flooding conditions from climate change?	No, the Town does not have access to resources to determine future flooding.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	No, there are no training needs at this time.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Town assists with the review/approval of Floodplain Development Permits.
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	Based on contractors' estimates.
What are the barriers to running an effective NFIP program in the community, if any?	Staffing and funding are the biggest challenges for the Town.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	None that the Town is aware of.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	March 12, 2009.
What is the local law number or municipal code of your flood damage prevention ordinance?	LL No. 11-2003
What is the date that your flood damage prevention ordinance was last amended?	October 7, 2003



NFIP Topic	Comments
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	The Town’s floodplain management program meets minimum requirements.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	During Site Plan Review the Planning Board considers a project's potential impact within the floodplain.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No, not at this time.

9.13.5 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 9.13-11 through Table 9.13-13.

Table 9.13-11. Recent and Expected Future Development

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	4	0	0	4
Permits within SFHA	0	0	0	0
2020				
Total Permits	2	0	1	3
Permits within SFHA	0	0	0	0
2021				
Total Permits	2	0	2	4
Permits within SFHA	0	0	0	0
2022				
Total Permits	3	0	1	4
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)





Table 9.13-12. Recent Major Development and Infrastructure from 2018 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
FedEx	Commercial	2	265 Industrial Park Drive 162.01-1-11	None	New FedEx facility with accessory vehicle repair building.

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

Table 9.13-13. 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
None Anticipated					

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

9.13.6 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 Town of Kirkwood’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in





Figure 9.13-1 through Figure 9.13-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Kirkwood has significant exposure. The maps show the location of potential new development, where available.



Figure 9.13-1. Town of Kirkwood Flood Hazard Area Extent and Location Map

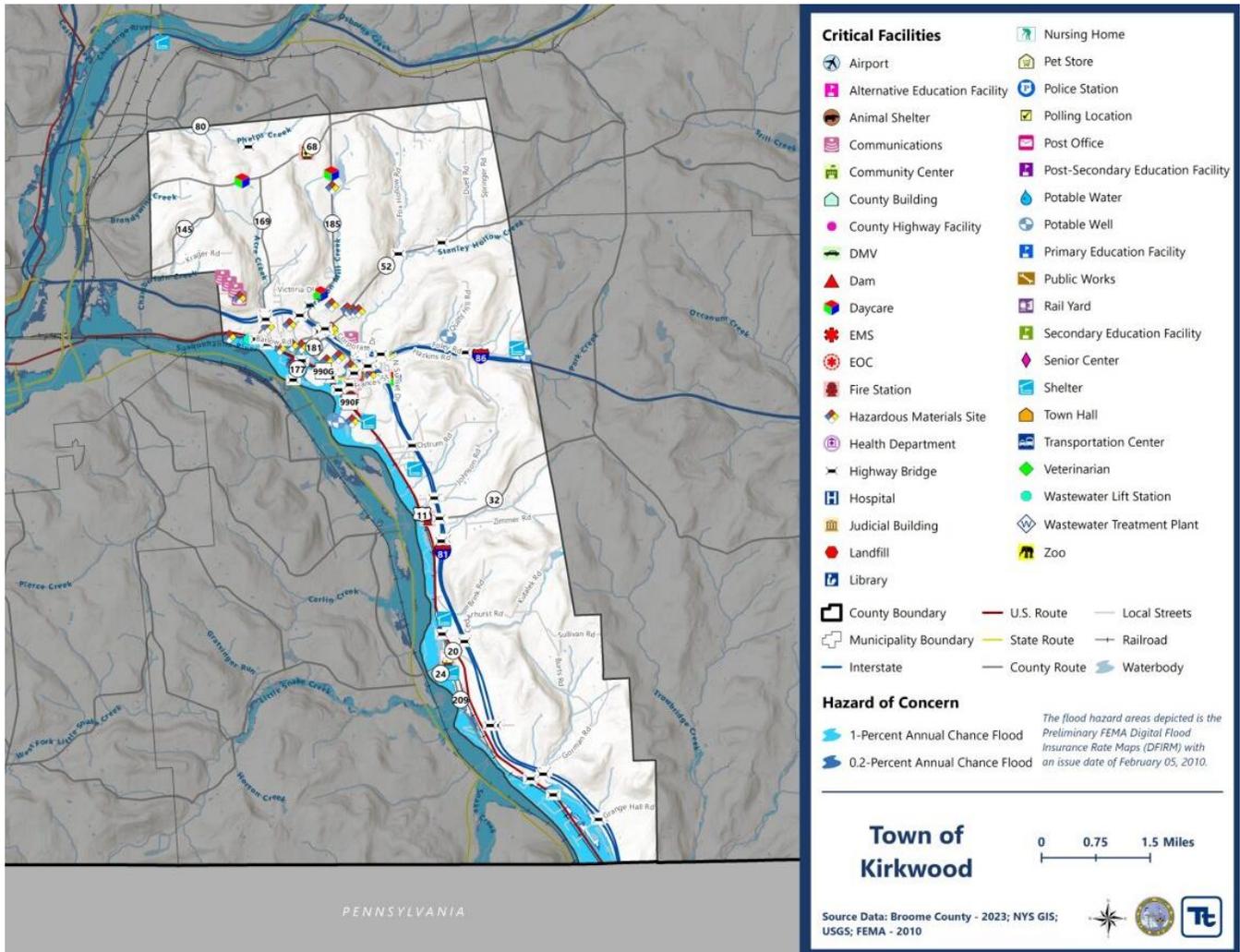
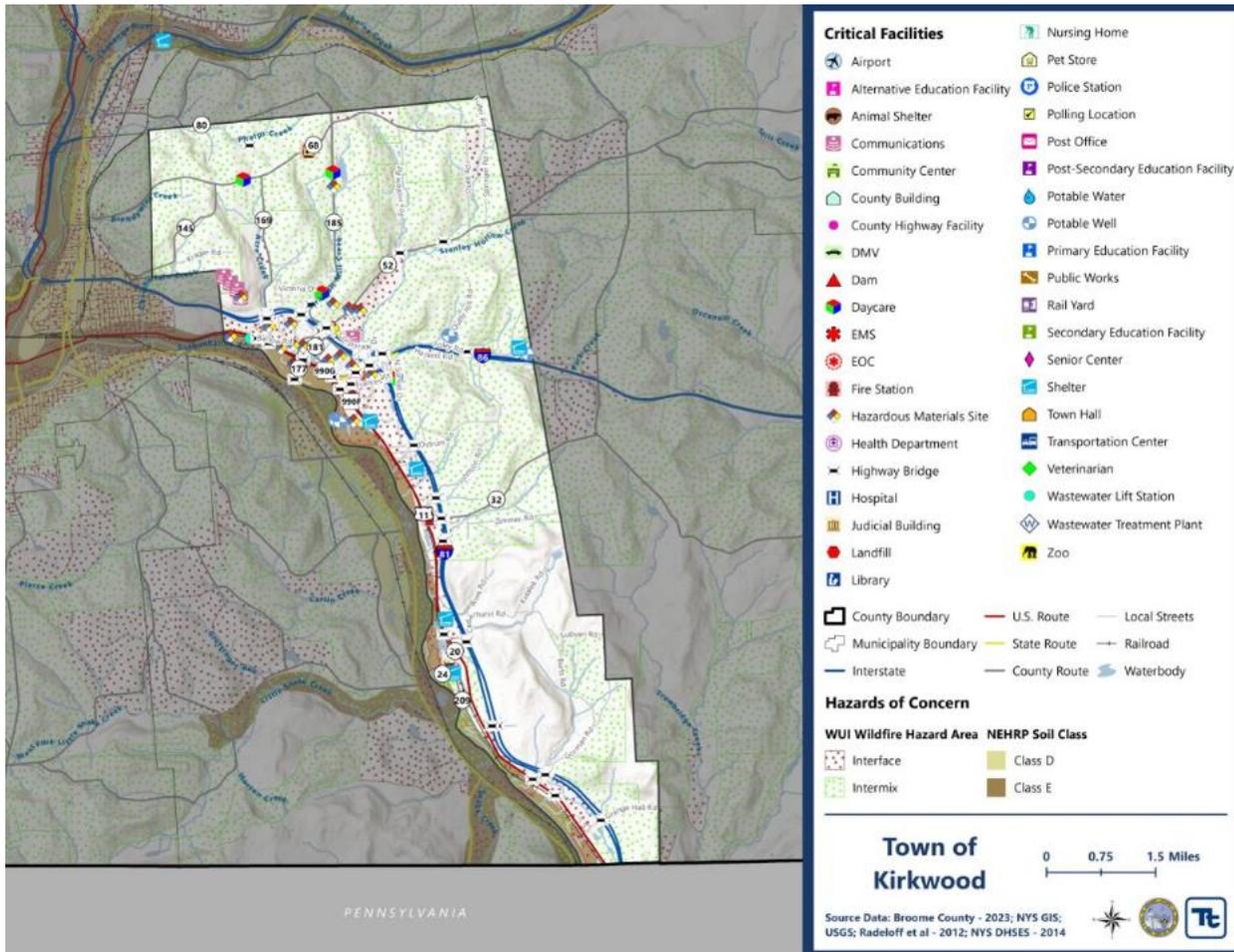




Figure 9.13-2. Town of Kirkwood NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Kirkwood is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.13-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.13-14. Hazard Event History in the Town of Kirkwood

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
January 20, 2020 – May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town was subject to closures and social distancing/masking requirements.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Town Highway Department crews had to cut and remove fallen trees along several roadways as well as plow the snow, however, the efforts were addressed during their day-to-day operations and did not result in significant damage or loss.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	While the County was impacted, the Town did not report significant damages from this event.
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	While the County was impacted, the Town did not report significant damages from this event.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Kirkwood.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Kirkwood 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 Town indicated the following:

- The Town agrees with the calculated hazard ranking in Table 9.13-15 as identified in the Hazard Ranking Meeting.

Table 9.13-15 shows Kirkwood’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.13-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

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 9.13-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.13-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Five Mile Point Station 1	Fire Station	Yes	Yes	Kirkwood Town-3	-
BINGHAMTON TRAVEL CENTER	Hazardous Materials Facility	Yes	Yes	2024-KirkwoodT-01	-



Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
DECAROLIS TRUCK RENTAL INC	Hazardous Materials Facility	Yes	Yes	2024-KirkwoodT-01	-
American Pipe & Plastics, Inc.	Hazardous Materials Facility	Yes	Yes	2024-KirkwoodT-01	-
AMREX CHEMICAL CO. INC.-COURT STREET	Hazardous Materials Facility	Yes	Yes	2024-KirkwoodT-01	-
Frito-Lay, Inc.	Hazardous Materials Facility	Yes	Yes	2024-KirkwoodT-01	-
NYS Police Kirkwood Barracks	Police Station	Yes	Yes	2024-KirkwoodT-04	-
WELL #1, MIDDLE WELL	Potable Well	Yes	Yes	2024-KirkwoodT-04	-
WELL #3, NORTH WELL	Potable Well	Yes	Yes	2024-KirkwoodT-04	-
Kirkwood Pump Station	Wastewater Lift Station	Yes	Yes	2024-KirkwoodT-04	-
Town of Kirkwood Public Works Garage	Public Works	Yes	Yes	2024-KirkwoodT-10	-
Bridge_1008080	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1008099	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1008110	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1008130	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1008140	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1013140	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1050190	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1050209	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_2225520	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.



Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_3358680	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_3358690	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_7702150	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
MIRABITO #78	Hazardous Materials Facility	No	Yes	2024-KirkwoodT-01	-
Kirkwood Town Hall	Town Hall	No	Yes	2024-KirkwoodT-04	-
Kirkwood Town Hall	Polling Location	No	Yes	2024-KirkwoodT-04	-
Kirkwood Post Office	Post Office	No	Yes	2024-KirkwoodT-04	-

Source: Broome County, 2023

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

- Brandywine Creek Site 1 Dam is located in Chenango River.
- Finch Hollow Site 1 Dam is located in Johnson City.
- Broome Corporate Park Pond Dam #2 is located in Kirkwood.

Identified Issues

After review of the Town of Kirkwood’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Kirkwood identified the following vulnerabilities within their community:

- The following privately owned critical facilities are located in the floodplain:
 - Binghamton Travel Center (Hazardous Materials Facility)
 - Decarolis Truck Rental, Inc. (Hazardous Materials Facility)
 - Frito Lay, Inc. (Hazardous Materials Facility)
 - American pipe and plastics, Inc. (Hazardous Materials Facility)
 - Amrex Chemical Co. (Hazardous Materials Facility)
 - Mirabito #78 (Hazardous Materials Facility)
- The Town has stands of dead or diseased trees, presenting a risk of falling branches and trees on infrastructure and private property. Falling trees or branches could result in injuries, death, closed roadways, plugging of culverts/bridges, and damage to overhead utilities. The Town's Highway





Department continues to remove trees but estimates some high-hazard trees remain that are outside of the Department's capabilities due to their size or being outside of the Right-of-Way.

- The status of the Town's bridges and culverts in relation to withstand hazard events is unknown. Failure of bridges or culverts could result in loss of life, damage to infrastructure, and limitations to emergency access.
- The following critical facilities owned by the Town are located in the Floodplain:
 - Five Mile Point Station 1 (Fire Station)
 - Kirkwood Barracks (Police Station)
 - Kirkwood Pump Station (Wastewater Lift Station)
 - Highway Bridges (1008080, 1008099, 1008110, 1008130, 1008140, 1013140, 1050190, 1050209, 2225520, 3358680, 3358690, 7702150)
 - Kirkwood Town Hall (Town hall and polling station)
 - Kirkwood Post Office.
 - Well #1
 - Well #3
 - Kirkwood Main Sanitary Sewer Station
- This RT 11 and Colesville road area experiences flooding 3-4 times per year and is impassable for several hours until the stormwater drains. After a flood event, NYSDOT crews clean NYS Route 11 and the creek to remove sediment, debris, and mud.
- The Town does not participate in the National Incident Command System (ICS).
- The Preliminary Mapping for the Town of Kirkwood accurately addresses flood risk within the community. However, these maps have never been formally adopted or made effective, so they are not used for regulatory purposes.
- The Town of Kirkwood does not have access to current resources to determine future flooding in the community from the impacts of climate change which is a growing concern given the increased intensity of precipitation events that leads to flooding.

9.13.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.13-17 indicates progress on the Town'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.



Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.13-17, the Town of Kirkwood identified the following mitigation efforts completed since the last HMP:

- The Town continues to tally loss/damage dollar amounts from flood events to eventually support a positive BCA for the Town DPW Garage and Building.
- Well #2 has been decommissioned.
- The Town continues to encourage the review of site plans by firefighting companies and emergency service providers to ensure capacity exists to support development.

Since the adoption of the County's first HMP, the Town of Kirkwood has made significant mitigation progress in the following areas:

- Floodplain Mitigation
- Site Plan Review
- Critical Facility Upgrades



Table 9.13-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Kirkwood Town-1	Relocate Kirkwood DPW Garage to another Town-owned parcel located outside of the floodplain.	Flood	Town of Kirkwood Commissioner of Public Works & Engineer	The land has been purchased outside of the floodplain with the intent of building a new garage. The old building will not be demolished and used only to store items that, when flooded, are not damaged	1. In Progress 2. The Town continues to tally loss/damage dollar amounts from flood events to eventually support a positive BCA.	1. Keep in the 2024 HMP 2. Land has been purchased outside of the floodplain with the intent of building a new garage. The old building will not be demolished and used only to store items that, when flooded, are not damaged 3. N/A
Kirkwood Town-2	Kirkwood Rt 11 / Colesville Rd Flooding	Flood	Town of Kirkwood Board & Engineer, NYSDOT	Redirect Stratton Mill Creek to drain into a stream channel along Colesville Road Ext. which ultimately empties into the Susquehanna River. Close off the drainage that flows under the properties along rt 11. This area experiences flooding 3-4 times per year and is impassable for several hours until the stormwater drains. After a flood event, NYSDOT crews clean NYS Route 11 and the creek to remove sediment, debris, and mud.	1. No Progress 2. The project has been delayed/on hold because environmental reviews have indicated the presence of cultural resources within the project area.	1. Keep in the 2024 HMP 2. Redirect Stratton Mill Creek to drain into a stream channel along Colesville Road Ext. which ultimately empties into the Susquehanna River. Close off the drainage that flows under the properties along rt 11. This area experiences flooding 3-4 times per year and is impassable for several hours until the stormwater drains. After a flood event, NYSDOT crews clean NYS Route 11 and the creek to remove sediment, debris, and mud. 3. N/A
		Flood		The Town will contact the facilities manager	1. No Progress 2. Challenges with staff availability.	1. Keep in the 2024 HMP.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Kirkwood Town-3	Protect the Five Mile Point Fire Station 1 to the 500-year flood level		Fire Department	and discuss options for protecting the facility to the 500-year level		2. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level 3. N/A
Kirkwood Town-4	Protect NYS Police Kirkwood Barracks to the 500-year flood level	Flood	Town Floodplain Administrator	The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level or relocating the facility.	1. No Progress. 2. Challenges with staff availability	1. Keep in the 2024 HMP. 2. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level or relocating the facility. 3. N/A
Kirkwood Town-5	Protect Well #1, Middle Well to the 500-year flood level	Flood	Town, facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level	1. No Progress. 2. Challenges with staff availability	1. Keep in the 2024 HMP. 2. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level. 3. N/A
Kirkwood Town-6	Protect the Well #2, South Well to the 500-year flood level	Flood	Town, facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level	1. No Progress. 2. Well #2 has been decommissioned due to the presence of high levels of iron and manganese and no longer needs protection.	1. Discontinue. 2. N/A 3. Well #2 has been decommissioned due to the presence of high levels of iron and manganese.
Kirkwood Town-7	Protect Well #3, North Well to the 500-year flood level	Flood	Town, facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level	1. No Progress. 2. Challenges with staff availability	1. Keep in the 2024 HMP. 2. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level. 3. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Kirkwood Town-8	Protect the Kirkwood Main Sanitary Sewer Station to the 500-year flood level	Flood	Town, facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level	<ol style="list-style-type: none"> No Progress. Challenges with staff availability 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year level. N/A
Kirkwood Town-9	The Town will explore if ICS (National Incident Command System) is a beneficial program to adopt and if so, research training opportunities.	All	Town of Kirkwood DPW	The Town will explore if ICS (National Incident Command System) is a beneficial program to adopt and if so, research training opportunities	<ol style="list-style-type: none"> No Progress. Challenges with staff availability 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The Town will explore if ICS (National Incident Command System) is a beneficial program to adopt and if so, research training opportunities N/A
Kirkwood Town-10	Encourage review of site plans by firefighting companies and emergency service providers to ensure capacity exists to support development.	All	Town of Kirkwood Fire Department	Site plans need to be reviewed to determine if emergency services are supported. Going forward the Town planning board shall consider giving the firefighting companies an opportunity to review site plans to ensure capacity exists to serve the	<ol style="list-style-type: none"> Ongoing Capability. N/A 	<ol style="list-style-type: none"> Discontinue N/A Ongoing capability for the Town.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				development as well as verify adequate fire.		



Proposed Hazard Mitigation Initiatives for the HMP Update

Kirkwood participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Kirkwood 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 the Town’s priorities.

Table 9.13-18 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. **Error! Reference source not found.** provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.13-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X				X					X
Disease Outbreak	X				X					X
Drought	X				X					X
Earthquake	X				X					X
Extreme Temperature	X				X					X
Flood	X	X	X		X	X		X	X	X
Invasive and Nuisance Species	X		X		X	X		X		X
Severe Storm	X	X	X		X	X		X	X	X
Wildfire	X		X		X	X		X		X
Severe Winter Storm	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 9.13-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-KirkwoodT-01	Privately Owned Critical Facilities in Floodplain	1	1	1	1	0	0	1	1	1	1	1	1	1	1	12	High
2024-KirkwoodT-02	Mitigation of Diseased and Dead Trees	1	1	1	1	0	0	1	1	1	1	1	1	1	1	12	High
2024-KirkwoodT-03	Town-Wide Bridge and Culvert Assessment	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High
2024-KirkwoodT-04	Critical Facilities in Floodplain	1	1	1	1	0	0	1	1	1	1	1	1	1	1	12	High
2024-KirkwoodT-05	Kirkwood Rt 11 / Colesville Rd Flooding	1	1	1	1	0	0	1	0	1	1	1	1	1	1	11	High
2024-KirkwoodT-06	Participate in ICS	1	1	1	1	1	0	1	0	0	1	1	1	1	1	11	High
2024-KirkwoodT-07	Repetitive Loss and Severe Repetitive Loss Properties	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High
2024-KirkwoodT-08	PFIRM Updates	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High
2024-KirkwoodT-09	Climate Change Resource Coordination	1	1	1	0	1	1	1	1	0	1	1	1	1	1	12	High
2024-KirkwoodT-10	Town of Kirkwood Public Works Garage	1	1	1	1	1	1	0	0	0	1	1	1	1	1	11	High
2024-KirkwoodT-11	Outreach to High-Hazard Dam Facilities	1	1	1	0	1	1	1	1	0	1	1	1	1	1	12	High

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



Action 2024-KirkwoodT-01. Privately Owned Critical Facilities in Floodplain

Action Name:	2024-KirkwoodT-01	
Description of the Problem:	<p>The following privately owned critical facilities are located in the floodplain:</p> <ul style="list-style-type: none"> • Binghamton Travel Center (Hazardous Materials Facility) • Decarolis Truck Rental, Inc. (Hazardous Materials Facility) • Frito Lay, Inc. (Hazardous Materials Facility) • American pipe and plastics, Inc. (Hazardous Materials Facility) • Amrex Chemical Co. (Hazardous Materials Facility) • Mirabito #78 (Hazardous Materials Facility) 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town Department of Public Works will conduct public outreach to property owners on flood mitigation and funding opportunities.	
Lead Agency:	Town, Department of Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short (< 5 years).	
Goals Met:	1, 2	
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in better-informed facility managers of critical facilities that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Critical facilities are inoperable during flood events.



SECTION 9.13. Town of Kirkwood

	Rain gardens.	Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers	Requires deployment, short-term solution.





Action 2024-KirkwoodT-02. Mitigation of Diseased and Dead Trees

Action Name:	2024-KirkwoodT-02		
Description of the Problem:	The Town has stands of dead or diseased trees, presenting a risk of falling branches and trees on infrastructure and private property. Falling trees or branches could result in injuries, death, closed roadways, plugging of culverts/bridges, and damage to overhead utilities. The Town's Highway Department continues to remove trees but estimates some high-hazard trees remain that are outside of the Department's capabilities due to their size or being outside of the Right-of-Way.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will explore options for the trimming and removal of high-hazard trees that have been damaged or killed by disease and will establish a long-term maintenance program that will be able to remove high-hazard trees as they come up. The first phase of the project after the program is established, will involve the survey of trees in the Town to determine which trees have been impacted by disease, invasive species, excessive precipitation and wind, and wildfire events. The Town will then work to remove trees by partnering with outside agencies such as utility providers and/or hiring contractors to remove the high-hazard trees. The Town will also research Municipal Law to determine if removing trees outside the R.O.W. is within their legal bounds.		
Lead Agency:	Highway Department		
Supporting Agencies:	Town Board		
Estimated Cost:	High (>\$100,000)		
Potential Funding Sources:	HMGP, BRIC, Town Budget		
Implementation Timeline:	Medium (> 5 years)		
Goals Met:	1, 2, 3, 4, 5, 6		
Benefits:	Reduction in damages or injuries from falling trees and power failure.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Removal of high-hazard trees will protect socially vulnerable populations and homes from damage. It will also reduce power failures by limiting the risk of downed trees on power lines.		
Impact on Critical Facilities/Lifelines:	This action reduces impacts to critical facilities from downed trees.		
Impact of Capabilities:	This action will ensure Town maintenance capabilities are efficient and effective in maintaining healthy foliage. It will also maintain power during hazard events, by limiting downed trees on power lines.		
Impact on Future Development:	This action will protect future development in areas where there are high-hazard trees.		
Climate Change Considerations:	N/A		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No action.	Problem persists.
	Ask residents to alert the Town to dangerous trees	Reactive. Likely to miss most trees.
	Remove all trees along areas with powerlines and property	Not feasible/environmentally damaging



Action 2024-KirkwoodT-03. Town-Wide Bridge and Culvert Assessment

Action Name:	2024-KirkwoodT-03		
Description of the Problem:	The status of the Town's bridges and culverts in relation to withstand hazard events is unknown. Failure of bridges or culverts could result in loss of life, damage to infrastructure, and limitations to emergency access.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Perform a Town-wide bridge and culvert assessment on an annual basis. The assessments should be well documented on applicable inspection forms. After the assessment, the Town will prioritize the repair, retrofit, or replacement of each structure. High-priority structures will then be analyzed based on project cost, schedule, and available funding sources.		
Lead Agency:	Town Engineer & Highway Department		
Supporting Agencies:	Town Board		
Estimated Cost:	Medium (>\$100,000)		
Potential Funding Sources:	HMGP, BRIC Grants, NYSDOT Grants, Municipal Budget		
Implementation Timeline:	Medium (>5 years)		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	Infrastructure protected from hazard damages.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations located near culverts and bridges will be protected against impacts from flooding and severe weather events.		
Impact on Critical Facilities/Lifelines:	The bridges and culverts are identified as community lifelines and this mitigation action will increase their ability to withstand future hazard events.		
Impact of Capabilities:	This action will ensure the capabilities of bridges and culverts within the Town will remain efficient and effective during hazard events.		
Impact on Future Development:	This action will protect future development located near culverts and bridges.		
Climate Change Considerations:	New or rehabilitated structures will be designed to handle increased stormwater discharge and/or velocities that can be attributed to climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Raingardens		Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers		Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2024-KirkwoodT-04. Critical Facilities in Floodplain

Action Name:	2024-KirkwoodT-04 (prev. Kirkwood Town – 3, Kirkwood Town-4, Kirkwood Town – 5, Kirkwood Town – 7, Kirkwood Town -8)		
Description of the Problem:	<p>The following critical facilities owned by the Town are located in the Floodplain:</p> <ul style="list-style-type: none"> • Five Mile Point Station 1 (Fire Station) • Kirkwood Barracks (Police Station) • Kirkwood Pump Station (Wastewater Lift Station) • Kirkwood Town Hall (Town hall and polling station) • Kirkwood Post Office. • Well #1 Middle Well • Well #3 North Well • Kirkwood Main Sanitary Sewer Station 		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost-effective measures.		
Lead Agency:	Town, Department of Public Work		
Supporting Agencies:	N/A		
Estimated Cost:	Low		
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget		
Implementation Timeline:	Short (< 5 years).		
Goals Met:	1, 2		
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Raingardens	Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers	Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2024-KirkwoodT-5. Kirkwood Rt 11 / Colesville Rd Flooding

Action Name:	2024-KirkwoodT-05 (prev. Kirkwood Town-2)		
Description of the Problem:	This RT 11 and Colesville road area experiences flooding 3-4 times per year and is impassable for several hours until the stormwater drains. After a flood event, NYSDOT crews clean NYS Route 11 and the creek to remove sediment, debris, and mud.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Redirect Stratton Mill Creek to drain into a stream channel along Colesville Road Ext. which ultimately empties into the Susquehanna River. Close off the drainage that flows under the properties along Rt 11.		
Lead Agency:	Town Engineer & Highway Department		
Supporting Agencies:	Town Board		
Estimated Cost:	Medium (>\$100,000)		
Potential Funding Sources:	HMGP, BRIC Grants, NYSDOT Grants, Municipal Budget		
Implementation Timeline:	Medium (>5 years)		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	Infrastructure protected from hazard damages.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations located near this area and utilizing these roads will be protected against impacts from flooding and severe weather events.		
Impact on Critical Facilities/Lifelines:	These road systems are identified as community lifelines and this mitigation action will increase their ability to withstand future hazard events.		
Impact of Capabilities:	This action will ensure the capabilities of the roadway within the Town will remain efficient and effective during hazard events.		
Impact on Future Development:	This action will protect future development located near these roadways and evacuation routes.		
Climate Change Considerations:	New or rehabilitated structures will be designed to handle increased stormwater discharge and/or velocities that can be attributed to climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Raingardens		Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers		Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2024-KirkwoodT-06. Participate in ICS

Action Name:	2024-KirkwoodT-06 (prev. Kirkwood Town -9)	
Description of the Problem:	The Town does not participate in the National Incident Command System (ICS).	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will explore if ICS (National Incident Command System) is a beneficial program to adopt and if so, research training opportunities.	
Lead Agency:	Town Board	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	Added training opportunities and resources for Town staff.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	Participating in ICS can supply resources to help mitigate critical facilities and lifelines so that they are sustainable for future impacts from hazards.	
Impact of Capabilities:	This action will enhance the town's capabilities by providing resources and training in hazard mitigation practices.	
Impact on Future Development:	N/A	
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for planners and emergency managers.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	Explore other opportunities outside of ICS.	Time costly.
	Rely only on internal information.	Lack of resources and collaboration.



Action 2024-KirkwoodT-07. Repetitive Loss and Severe Repetitive Loss Properties

Action Name:	2024-KirkwoodT-07		
Description of the Problem:	Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has 38 repetitive loss properties and 10 severe repetitive loss properties, but other properties may be impacted by flooding as well.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Conduct outreach to 38 flood-prone property owners, including RL/SRL property owners, 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 flood-prone areas that experience frequent flooding (high-risk areas).		
Lead Agency:	Town Board		
Supporting Agencies:	N/A		
Estimated Cost:	Low		
Potential Funding Sources:	BRIC, FMA, HMGP, match from property owners		
Implementation Timeline:	Short		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	Eliminates flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Collecting data regarding homeowners who reside within flood-prone areas provides an opportunity to introduce location-specific opportunities for assistance.		
Impact on Critical Facilities/Lifelines:	Outreach conducted to increase the removal of structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	Outreach which promotes the removal of risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
Impact on Future Development:	Increased outreach to homeowners within a flood-prone area will limit construction in areas that are prone to hazard events.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	Do nothing.	Problem persists.
	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 2024-KirkwoodT-08. PFIRM Updates

Action Name:	2024-KirkwoodT-08		
Description of the Problem:	The Preliminary Mapping for the Town of Kirkwood accurately addresses flood risk within the community. However, these maps have never been formally adopted or made effective, so they are not used for regulatory purposes.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will work with FEMA to determine the status of PFIRMs and move towards adoption since these maps more accurately depict the Town's flood risk from severe storms and severe winter storms than the current effective FIRM. The updated FIRM will allow the Town to enforce NFIP regulations and standards on all properties that are affected by flooding, according to the best and most recently available data (i.e., PFIRM).		
Lead Agency:	Town Board		
Supporting Agencies:	FEMA		
Estimated Cost:	Low		
Potential Funding Sources:	Municipal Budget		
Implementation Timeline:	Short		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	Updated maps that adequately address flooding within the community		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	PFIRMs which are adopted by FEMA will be used to safely plan and prepare for areas of increased flooding in order to protect all community members from impacts.		
Impact on Critical Facilities/Lifelines:	Updated PFIRMs can be used to identify the areas of most concern and protect critical facilities located within or nearby those areas.		
Impact of Capabilities:	This action will enhance the town's capabilities by providing updated flood maps for planning and preparedness purposes.		
Impact on Future Development:	Updated flood maps will be helpful to ensure safe build-out of future development within the Town, away from flooded areas.		
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for planners and emergency managers.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists.
	Use outdated flood maps adopted by FEMA already		Not accurate, outdated, problem persists
	Use maps without FEMA adoption.		Lack of collaboration.



Action 2024-KirkwoodT-09. Climate Change Resource Coordination

Action Name:	2024-KirkwoodT-09	
Description of the Problem:	The Town of Kirkwood does not have access to current resources to determine future flooding in the community from the impacts of climate change which is a growing concern given the increased intensity of precipitation events that leads to flooding.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will work with the County and academic organizations to determine the potential impacts of climate change on future flooding conditions and will obtain GIS data that depicts the potential impacts of climate change. The Town will incorporate these future projections into planning, including permitting and development.	
Lead Agency:	Town Board	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short	
Goals Met:	1, 2, 3, 4, 5	
Benefits:	Current resources and training for staff to be up-to-date on climate change impacts.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	This action will provide accurate resources to determine the best planning policies that will protect the lives of all community members within the Town.	
Impact on Critical Facilities/Lifelines:	This action will provide accurate resources and projections to determine how best to protect critical facilities from future flooding concerns.	
Impact of Capabilities:	This action will enhance the town's capabilities for preparing for and responding to climate change impacts.	
Impact on Future Development:	This action will help to provide better planning practices for future development.	
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for planners and emergency managers.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists.
	Deny climate change	Problem persists.
	Rely only on internal information.	Lack of resources and collaboration.



Action 2024-KirkwoodT-10. Town of Kirkwood Public Works Garage

Action Name:	2024-KirkwoodT-10 (prev. Kirkwood Town -1)		
Description of the Problem:	The Town of Kirkwood Public Works Facility and Garage are in the floodplain.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The land has been purchased outside of the floodplain with the intent of building a new garage. The old building will not be demolished and used only to store items that, when flooded, are not damaged.		
Lead Agency:	Town Department of Public Works		
Supporting Agencies:	Town Engineering Department		
Estimated Cost:	High		
Potential Funding Sources:	HMMGP, Municipal Budget		
Implementation Timeline:	Medium		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	The Town Department of Public Works garage will be safe from flood exposure.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	The Public Works Department Garage will be safe from flooding impacts and severe storm events.		
Impact of Capabilities:	This action will ensure that the Public Works Garage is safely operable during a severe flood or storm event.		
Impact on Future Development:	N/A		
Climate Change Considerations:	This action takes into consideration climate change impacts on the severity and frequency of flooding.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Build levee around DPW facility/garage.		Must be deployed, does not solve the issue
	Elevate DPW facility/garage.		Costly, not an option.



Action 2024-KirkwoodT-11. Outreach to High-Hazard Dam Facilities

Action Name:	2024-KirkwoodT-11		
Description of the Problem:	The following High Hazard Dams are in the Town of Kirkwood or neighboring jurisdictions: <ul style="list-style-type: none"> • Brandywine Creek Site 1 Dam located in Chenango River. • Finch Hollow Site 1 Dam located in Johnson City. • Broome Corporate Park Pond Dam #2 located in Kirkwood. 		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct outreach to inform owners of the high-hazard dams of risk and possible mitigation actions to protect against dam failure.		
Lead Agency:	Town Department of Public Works		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Municipal Budget		
Implementation Timeline:	Short		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	High-hazard dam owners will be better educated on the risk of dam failure and be aware of possible mitigation actions to pursue.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Outreach to high-hazard dam owners will reduce flood risk to the community, by promoting mitigation actions to protect against dam failure.		
Impact on Critical Facilities/Lifelines:	This action will promote education and resources for safe and operable dams near the Town, which are a critical facility.		
Impact of Capabilities:	This action will ensure the most current data and resources are available for high-hazard dam owners in and around the Town.		
Impact on Future Development:	This action will protect future development in and around the high-hazard dams.		
Climate Change Considerations:	This action takes into account climate change impacts and projections by supplying the most updated information for high-hazard dam owners.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Remove dams		Not an option, costly.
	Relocate residents		Not an option, costly.



Action 2024-KirkwoodT-12. Socially Vulnerable Populations Outreach

Action Name:	2024-KirkwoodT-12		
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness of hazards, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	Short (< 3 years)		
Goals Met:	1, 2, 3		
Benefits:	High-hazard dam owners will be better educated on the risk of dam failure and be aware of possible mitigation actions to pursue.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Town's already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No Action.	Problem persists.	
	Rely on state and federal resources.		
	Use only a few methods of distribution.		



SECTION 9.

9.15 VILLAGE OF LISLE

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist the public and private sectors in the Village of Lisle with reducing losses from future hazard events. This annex is not guidance on 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 Village of Lisle, describes who participated in the planning process, assesses the Village’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.15.1 Hazard Mitigation Planning Team

The Village of Lisle identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Village departments. The Mayor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.15-1 summarizes Village officials who participated in the development of the annex and what capacity. Additional documentation of the Village’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.15-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Gerald Mackey, Mayor Address: P.O. Box 365, Lisle, NY 13797 Phone Number: 607-765-4762 Email: jmmackey@yahoo.com	Name/Title: Terry Lynch, Trustee Address: P.O. Box 365, Lisle, NY 13797 Phone Number: 607-341-8517 Email: tbert1168@gmail.com
NFIP Floodplain Administrator	
Name/Title: Eric Hughes, Trustee Address: P.O. Box 365, Lisle, NY 13797 Phone Number: 607-244-5641 Email: ehughes23@yahoo.com	
Additional Contributors	
Name/Title: Gerald Mackey, Mayor Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Terry Lynch, Trustee Method of Participation: Provided key input in the planning process	
Name/Title: Eric Hughes, Trustee Method of Participation: Provided key input in the planning process	





9.15.2 Municipal Profile

The Village of Lisle is located in the southeastern portion of the Town of Lisle in northwestern Broome County, New York. The Village is bordered by the Town of Lisle to the North, the Town of Triangle and Village of Whitney Point to the east, the Town of Barker to the southeast, and the Town of Nanticoke to the South. The Tioughnioga River makes up the eastern border of the Village as it flows towards the Village of Whitney Point. Dudley Creek flows through the northern part of the Village. State Route 79 is the major road found in the Village and connects to U.S. Route 11 (Broome County 2019).

The Town of Lisle was first settled around 1791 and was formed in 1801 from the Town of Union. The Village of Lisle was incorporated in 1876. In 1831, part of Lisle was used to create the Towns of Barker, Nanticoke, and Triangle. The flood of 1935 destroyed a large part of the town and discoveries from that flood are displayed annually at the town's Maple Festival. The Whitney Point dam was constructed as a result of the flood and is 95 feet above the streambed to control water flow and prevent major flooding. (Broome County 2019). According to the U.S. Census, the 2020 population for the Village of Lisle was 348, an 8.8 percent increase from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 1.1 percent of the population is 5 years of age or younger, 13.8 percent is 65 years of age or older, 0 percent is non-English speaking, 6.6 percent is below the poverty threshold, and 12.9 percent is considered disabled.

9.15.3 Jurisdictional Capability Assessment and Integration

The Village of Lisle 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Village of Lisle to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.15-2 summarizes the planning and regulatory tools that are available to the Village of Lisle. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.15-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	January 14, 2008	Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This local law provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in this Village.				
Zoning/Land Use Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Subdivision Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Site Plan Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Local Law No. 1 of 1987	Local	Village Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The ordinance establishes regulations for flood hazard areas by regulating the types of uses, requiring mitigation measures at initial construction, controlling alteration of natural floodplains and protective barriers and other development that may increase erosion or flood damages, and ensuring the Village qualifies and maintains participation in the NFIP.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Planning Documents				
General/Comprehensive Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Continuity of Operations Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.15-3 summarizes the capabilities of the Village of Lisle to oversee and track development.





Table 9.15-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	No	The town of Lisle issues building permits for the Village
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	SFHA
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	90%

Administrative and Technical Capability

Table 9.15-4 summarizes potential staff and personnel resources available to the Village of Lisle and their current responsibilities that contribute to hazard mitigation.

Table 9.15-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	No	-
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	No	-
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	With neighboring fire departments
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other		
Technical/Staffing Capability		





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planners or engineers with knowledge of land development and land management practices	No	-
Engineers or professionals trained in building or infrastructure construction practices	No	-
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.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator (FPA)	Yes	Mayor

Fiscal Capability

Table 9.15-5 summarizes financial resources available to the Village of Lisle.

Table 9.15-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	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.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.15-6 summarizes the education and outreach resources available to the Village of Lisle.





Table 9.15-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.15-7 summarizes classifications for community programs available to the Village of Lisle.

Table 9.15-7. 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)	Yes	05/5Y	Unknown
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

- N/A Not applicable
- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.15-8 summarizes the adaptive capacity for each identified hazard of concern and the Village’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 9.15-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.15.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.15-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.15-9 summarizes the NFIP statistics for the Village of Lisle.

Table 9.15-9. Village of Lisle NFIP Summary of Policy and Claim Statistics

# Policies	1
# Claims (Losses)	1
Total Loss Payments	\$7,958
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics current as of October 2023





Flood Vulnerability Summary

Table 9.15-10 provides a summary of the NFIP program in the Village of Lisle.

Table 9.15-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	No areas
Do you maintain a list of properties that have been damaged by flooding?	A list is not maintained.
Do you maintain a list of property owners interested in flood mitigation?	A list is not maintained.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	As of 2018, there is no interest among residents and business owners to mitigate their properties.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Procedures are not developed.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	The Mayor
Are any certified floodplain managers on staff in your jurisdiction?	Gerald Mackey, Mayor is the Floodplain Administrator
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	None Needed
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit Review
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	Procedures need to be developed.
What are the barriers to running an effective NFIP program in the community, if any?	The FPA indicated that there are currently no barriers to running an effective floodplain management program and he feels adequately supported and trained to fulfill his responsibilities.



NFIP Topic	Comments
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	The Village maintains compliance with and good standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas)
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown
What is the local law number or municipal code of your flood damage prevention ordinance?	Local Law No. 1 of 1987
What is the date that your flood damage prevention ordinance was last amended?	1987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Village’s flood damage prevention ordinances meet the minimum set by FEMA and New York State. The Village does not have additional ordinances, plans, or programs that support floodplain management.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Not at this time

9.15.5 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 9.15-11 through Table 9.15-13.

Table 9.15-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	0	0



	New Construction Permits Issued			
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.15-12. Recent Major Development and Infrastructure from 2018 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
None Identified					

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

Table 9.15-13. 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
None Anticipated					

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

9.15.6 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 Village of Lisle’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

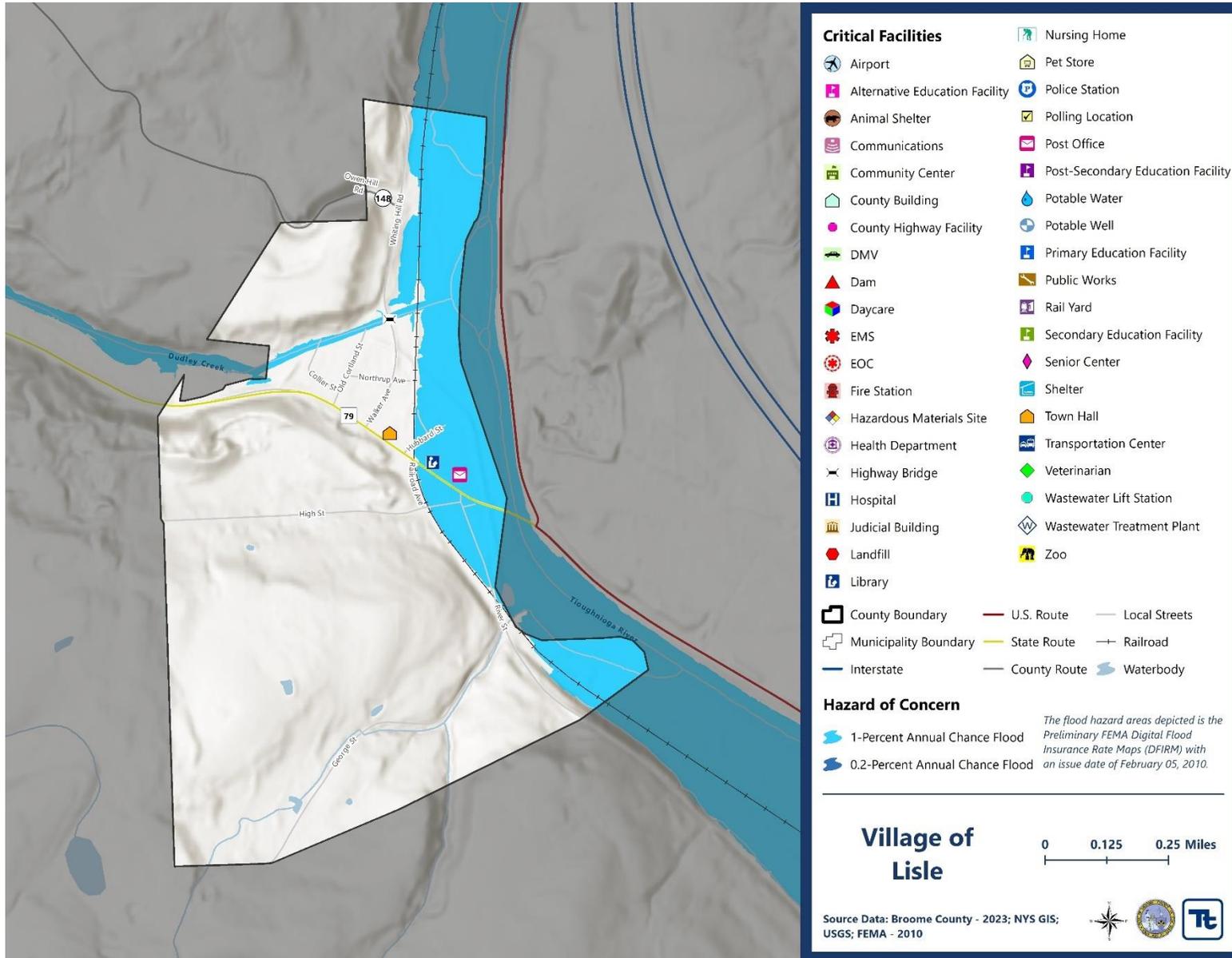
Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Village are shown in Figure 9.15-1 through Figure 9.15-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Lisle has significant exposure. The maps show the location of potential new development, where available.



SECTION 9.15. Village of Lisle

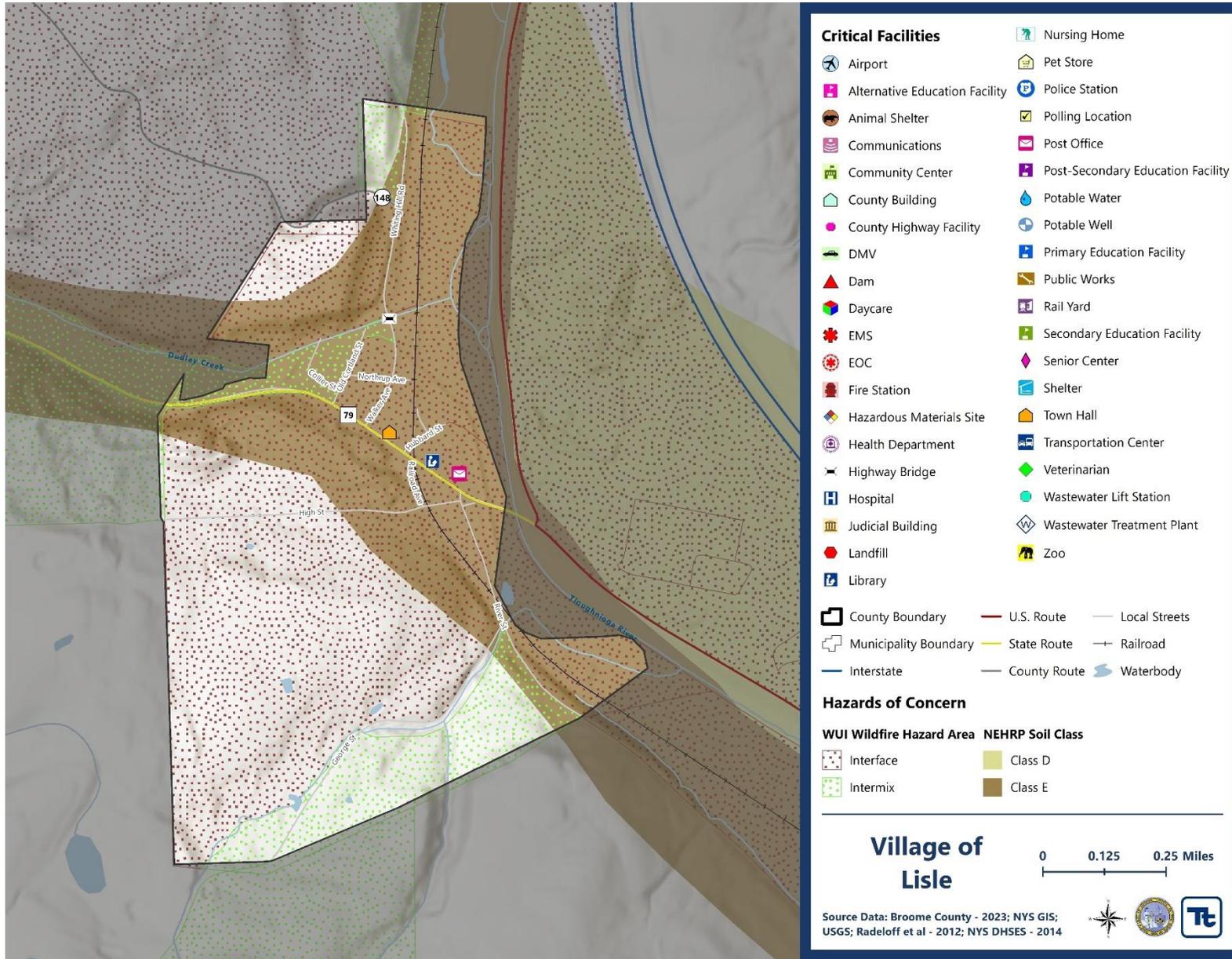
Figure 9.15-1. Village of Lisle Flood Hazard Area Extent and Location Map





SECTION 9.15. Village of Lisle

Figure 9.15-2. Village of Lisle NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Village of Lisle is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.15-14 provides details on loss and damage in the Village during hazard events since the last hazard mitigation plan update.

Table 9.15-14. Hazard Event History in the Village of Lisle

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	Although the County was impacted, the Village did not experience notable damages or losses.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Village was subject to closures and masking/social distancing requirements.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	Although the County was impacted, the Village did not experience notable damages or losses.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Although the County was impacted, the Village did not experience notable damages or losses.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Village of Lisle.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Lisle 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 Village indicated the following:

- The Village agreed with the calculated hazard rankings.

Table 9.15-15 shows Lisle’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.15-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	High
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.15-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.15-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Lisle Free Library	Library	X	X	Action 2024-LisleV-08	-
Lisle Post Office	Post Office	X	X	Action 2024-LisleV-08	-
Bridge_2225530	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

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





- Nanticoke Creek Site 3 Dam
- Nanticoke Creek Site 9a Dam
- Nanticoke Creek Site 9c Dam

Identified Issues

After review of the Village of Lisle’s hazard event history, hazard rankings, hazard location, and current capabilities, the Village of Lisle identified the following vulnerabilities within their community:

- The Village is experiencing excessive flooding in and around the Village and the root cause has not been determined.
- The Lisle Free Library and Lisle Post Office are located within the floodplain, which could lead to increased vulnerabilities during high precipitation events.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.
- Mitigation planning in the Village is often a separate effort from many other types of planning within the Village. Disregarding mitigation considerations may cause gaps in the ability to fully prepare for hazard events.
- The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality needs a formal process and plans to provide a framework for conducting such inspections and determinations.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Village is currently not a member of the StormReady program.
- There are critical facilities in the Village which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
- The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.
- The Village has potential impacts from three high-hazard potential dams (Nanticoke Creek Site 3 Dam, Nanticoke Creek Site 9a Dam, and Nanticoke Creek Site 9c Dam). These structures have the potential to impact those living nearby.

9.15.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.



Past Mitigation Initiative Status

Table 9.15-17 indicates progress on the Village’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 9.15-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
V. Lisle-1	Repetitive Loss Property	Flood, Severe Storm Flood	Village Floodplain Administrator working with homeowner Village Floodplain Administrator working with facility operators/owners	One property is identified as a repetitive loss property. It is located along the Tioughnioga River and has experienced flood damage. The home is not mitigated to protect it from future flood damage.	1. No Progress 2. No RL properties	1. Discontinue 2. The NFIP FEMA numbers report zero repetitive loss properties.
V. Lisle-2	Lisle Free Library – Critical Facility	Flood, Severe Storm Flood	Village Floodplain Administrator working with homeowner Village Floodplain Administrator working with facility operators/owners	The Lisle Free Library is an identified critical facility that is located in the floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.	1. No Progress 2. Issues of funding	1. Include 2. The Lisle Free Library is a critical facility located in the floodplain.
V. Lisle-3	Lisle Post Office – Critical Facility	Flood, Severe Storm	Village Floodplain Administrator working with homeowner	The Lisle Post Office is an identified critical facility that is located in the floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.	1. No Progress 2. Issues of funding	1. Include 2. The Lisle Post Office is a critical facility located in the floodplain.



Proposed Hazard Mitigation Initiatives for the HMP Update

Lisle participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Lisle 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 the Village’s priorities.

Table 9.15-18 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. Table 9.15-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.15-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	-	-	X	X	X	X	-	-	X
Disease Outbreak	X	-	-	X	X	-	X	-	-	-
Drought	X	-	-	X	X	-	X	-	-	-
Earthquake	X	-	-	X	X	-	X	-	-	X
Extreme Temperature	X	-	-	X	X	-	X	-	-	X
Flood	X	X	-	X	X	X	X	-	X	X
Invasive and Nuisance Species	X	-	-	X	X	-	X	-	-	X
Severe Storm	X	X	-	X	X	X	X	-	X	X
Severe Winter Storm	X	X	-	X	X	X	X	-	X	X
Wildfire	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 stormwater 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 9.15-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-Village of Lisle-01	Flood Study	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Village of Lisle-02	Floodproofing	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High
2024-Village of Lisle-03	Debris Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2024-Village of Lisle-04	Hazard Mitigation Integration	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2024-Village of Lisle-05	Substantial Damage Management Plan	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
2024-Village of Lisle-06	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
2024-Village of Lisle-07	Critical Facilities in the Floodplain	1	1	1	1	1	0	0	1	1	0	1	1	1	0	10	Medium
2024-Village of Lisle-08	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-Village of Lisle-09	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High

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



Action 2024-LisleV-01. Flood Study

Action Name:	2024-Village of Lisle-01		
Description of the Problem:	The Village is experiencing excessive flooding in and around the Village and the root cause has not been determined.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Village will conduct a flood study and will begin working with the United States Army Corps of Engineers (USACE) to identify problem locations and potential mitigation actions to reduce the occurrence of flooding and flood risk when floods do occur. Once identified, cost-effective actions will be carried out.		
Lead Agency:	Army Corps of Engineers (USACE)		
Supporting Agencies:	Broome County DEC		
Estimated Cost:	TBD after Study		
Potential Funding Sources:	HMGP, BRIC, FMA, Broome County, Annual Budget		
Implementation Timeline:	Within 5 Years		
Goals Met:	1		
Benefits:	<ul style="list-style-type: none"> Flood risk will be reduced in hazard-prone areas. Vulnerable communities will be identified ahead of a flood event, which will allow first responders to plan and stage resources in those areas. Future mitigation projects may be identified that will further increase overall community resiliency to flooding and other hazard events. 		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	<ul style="list-style-type: none"> Areas vulnerable to flooding will be made aware to Village leadership and first responders which can emphasize controlled future development. If cost-effective mitigation actions are identified, they may be implemented in flood-prone areas that could reduce their overall risk of loss of life and property. 		
Impact on Critical Facilities/Lifelines:	<ul style="list-style-type: none"> Transportation routes will be more likely to remain open if flooding is mitigated along them. Hydration systems may remain potable for community usage if projects are identified to protect the existing infrastructure from flooding. 		
Impact of Capabilities:	Improves the Village's capabilities to handle floods by providing the Village with knowledge of the location of flood-prone areas.		
Impact on Future Development:	<ul style="list-style-type: none"> Flood insurance costs may decrease. 		
Climate Change Considerations:	Consideration should be taken to ensure any projects conducted have accounted for increased extreme rainfall events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action	-
	Upsizing Storm Drains	The Village is not aware of proper storm drain sizes that will mitigate the flood hazard.
	Elevating roads and critical facilities/lifelines to prevent flooding	There may be more cost-effective solutions that can be identified through a flood study.



Action 2024-LisleV-02. Floodproofing

Action Name:	Action 2024-LisleV-03.	
Description of the Problem:	The Lisle Free Library and Lisle Post Office are located within the floodplain, which could lead to increased vulnerabilities during high precipitation events. The Library also can be used as an emergency shelter, and flood events may prevent its use.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>The Village will conduct a feasibility assessment to determine what additional floodproofing measures are needed at the Lisle Free Library and the Lisle Post Office to protect each to the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> Elevation of facility Floodproofing of facility Mobile flood-barriers <p>Once the most cost-effective option is identified, the Village will carry out the option.</p>	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County; FEMA	
Estimated Cost:	TBD after feasibility assessment is complete	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Village Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1	
Benefits:	Ensures continuity of operations of the library and post office.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on, including providing potential sheltering capabilities.	
Impact on Critical Facilities/Lifelines:	This action will protect the library and the post office, which is a critical facility, maintaining the critical services that it provides.	
Impact of Capabilities:	This action improves continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.	
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.	
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Relocate facility		Relocation is expensive and results in the loss or delay of critical services in the immediate area
	Establish plans to enter into an MOU with neighboring facilities to provide service during flood events		Reduction in response times and delay of critical services in the immediate area.



Action 2024-LisleV-03. Debris Management Plan

Action Name:	Action 2024-LisleV-04. Debris Management Plan		
Description of the Problem:	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for the execution of the plan. The plan will align with permitted temporary collection areas.		
Lead Agency:	Village Administration		
Supporting Agencies:	Broome County, Town of Lisle Administration		
Estimated Cost:	Staff Time		
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Village Budget		
Implementation Timeline:	Within 5 Years		
Goals Met:	1		
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	The action will result in increased post-disaster capabilities.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No Action	-
	Rely on federal cleanup	These services may or may not be available
	Rely on state cleanup	These services may or may not be available





Action 2024-LisleV-04. Hazard Mitigation Integration

Action Name:	Action 2024-LisleV-05. Hazard Mitigation Integration	
Description of the Problem:	Mitigation planning in the Village is often a separate effort from many other types of planning within the Village. Disregarding mitigation considerations may cause gaps in the ability to fully prepare for hazard events.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	During future updates or creation of the Master Plan, Floodplain Management Plan, or the Emergency Operation Plan, work with the Village agencies to integrate hazard mitigation principles and recommendations into the plans. Additionally, use these hazard mitigation principles and plan recommendations to update local building and zoning codes to create a more resilient community.	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Staff Time	
Potential Funding Sources:	HMGP, BRIC, FMA, Annual Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1	
Benefits:	<ul style="list-style-type: none"> Provides an opportunity for coordination amongst agencies and their planning efforts to improve the overall ability to prepare for, respond to, and recover from events. Mitigation considerations being taken when developing or updating building and zoning codes can lessen the risk of damage from a hazard event and increase overall community resiliency. 	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Communities that collaborate and coordinate their planning efforts are more likely to have identified ways to best work with vulnerable populations to increase their level of preparedness.	
Impact on Critical Facilities/Lifelines:	Integrating mitigation into building and zoning protects existing infrastructure and guides the safe development of new construction.	
Impact of Capabilities:	A consolidated planning process brings together the capabilities of agencies and departments and better identifies what resources are available at any given point in time and where they are needed most.	
Impact on Future Development:	<ul style="list-style-type: none"> Coordinated planning efforts provide an opportunity for efficient and safe growth and development. 	





	<ul style="list-style-type: none"> Updated building and zoning codes ensure that any new development that does take place is built to the safest standards based on the best available data. 		
Climate Change Considerations:	As the climate changes, planning processes will require a more intense focus on plan maintenance and gathering the best data to remain current and accurate over time.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on the County for hazard mitigation integration within their plans		This action does not improve hazard mitigation integration in the Village plans and ordinances
	Create new plans to address HMP concerns		Current plans and ordinances need to be integrated with the HMP



Action 2024-LisleV-05. Substantial Damage Management Plan

Action Name:	Action 2024-LisleV-06. Substantial Damage Management Plan	
Description of the Problem:	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"> • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for “market value” and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure’s pre-damage value. • Require permits for floodplain development. <p>The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality needs a formal process and plans to provide a framework for conducting such inspections and determinations.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	<p>The municipality will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Village Administration	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan.	
Goals Met:	1	
Benefits:	This plan will provide a process for making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliant with current codes. Socially vulnerable populations may not have the financial means to	





	make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.		
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.		
Impact of Capabilities:	This action improves disaster recovery capabilities.		
Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future developments in the municipality.		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides additional planning for disaster recovery.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on state or federal resources following disaster events		Resources may not be available during major widespread events
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations.		A plan outlining responsibility is still necessary to prevent missing important requirements.



Action 2024-LisleV-06. StormReady Program Participation

Action Name:	Action 2024-LisleV-07. StormReady Program Participation	
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning in relation to floods, severe storms, severe winter storms, and extreme temperature events. The Village is currently not a member of the StormReady program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will coordinate with the local NWS office to complete all requirements to become a StormReady community to better prepare the Village to deal with floods, severe storms, severe winter storms, and extreme temperatures.	
Lead Agency:	Village Administration	
Supporting Agencies:	FEMA, Broome County	
Estimated Cost:	Staff Time	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 2,3	
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.	
Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.	
Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and issue timely and effective warnings ahead of severe weather events. StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 	



Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.		
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Increase warning system capabilities without StormReady guidance		No CRS points would be available. Less public awareness and support from NWS.
	Hire a third party to conduct emergency warning system improvements		Costly. No CRS points would be available. Less public awareness and support from NWS.



Action 2024-LisleV-07. Critical Facilities in the Floodplain

Action Name:	Action 2024-LisleV-08. Critical Facilities in the Floodplain	
Description of the Problem:	There are critical facilities in the Village which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Coordinate with the facility managers at the Lisle Free Library and Lisle Post Office; to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify the most cost-effective mitigation option. Phase 2: Work with the facility manager to implement selected action based on available funding and local match ability.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Village Administration, Facility Managers	
Estimated Cost:	TBD based on mitigation option	
Potential Funding Sources:	FEMA BRIC, HMGP, Village Budget, Private Owners	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 5	
Benefits:	This action will remove or reduce critical facility and community lifeline vulnerability to flood hazards and remove or reduce safety risks for first responders.	
Mitigation Action Type: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.	
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	
Impact of Capabilities:	This action will enhance the Village’s current NFIP capabilities.	
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	
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. As sea level rises due to climate change, the area of the flood hazard may expand.	





SECTION 9.15. Village of Lisle

Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Floodproof existing structures		May not necessarily reduce the risk
	Construct floodwalls to stop flood issues.		Will most likely interrupt natural floodplain function





Action 2024-LisleV-08. Socially Vulnerable Populations Outreach

Action Name:	2024-LisleV-09. Socially Vulnerable Populations Outreach		
Description of the Problem:	The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Village will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website.		
Lead Agency:	Village Administration		
Supporting Agencies:	Broome County, FEMA		
Estimated Cost:	Low		
Potential Funding Sources:	Village Budget, HMGP		
Implementation Timeline:	Within 3 years		
Goals Met:	1, 2, 3		
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Village. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Village will become educated on hazards and risks. The Village will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Village's already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action	Current methods remain the only ones used.
	Rely on state or federal resources.	Resources may be generalized and not specific to the risks in the Village.
	Use only a few methods for distribution.	Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.



Action 2024-LisleV-09. Dam Owner Partnership

Action Name:	Action 2024-LisleV-10. Dam Owner Partnership	
Description of the Problem:	The Village has potential impacts from three high-hazard potential dams (Nanticoke Creek Site 3 Dam, Nanticoke Creek Site 9a Dam, and Nanticoke Creek Site 9c Dam). These structures have the potential to impact those living nearby.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Work with the owners of the dams to ensure inspections and safety procedures are up to date. Identify mitigation actions to ensure the integrity of the dams and that it is protected up to the 0.2-percent flood hazard area.	
Lead Agency:	Village Administration	
Supporting Agencies:	Dam Owners, NYSDEC	
Estimated Cost:	Low	
Potential Funding Sources:	Village Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 4, 5	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
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 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.	
Impact of Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change may increase the frequency and severity of weather-related disaster events, which may contribute to the likelihood of a dam failure event. This action will increase the capabilities to respond to these events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	-
	Utilize information from NYSDEC.	Owners may not be required to submit a safety plan to the State.
	Utilize information from the National Inventory of Dams	Not all dams are listed on the inventory





SECTION 9.

9.16 TOWN OF MAINE

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist the public and private sectors in the Town of Maine with reducing losses from future hazard events. This annex is not guidance on 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 Town of Maine, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.16.1 Hazard Mitigation Planning Team

The Town of Maine identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Assessor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.16-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.16-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Doug Barton, Assessor Address: 2647 State Route 26, Maine, NY Phone Number: (607) 862-3334 x107 Email: barton@townofmaine.org	Name/Title: Joseph Dohnalek, Superintendent of Highways Address: 2647 State Route 26, Maine, NY Phone Number: 607-862-9209 Email: dohnalek@townofmaine.org
NFIP Floodplain Administrator	
Name/Title: Robert Lawler, Code Enforcer Address: PO Box 336, 12 Lewis Street Maine, NY 13802 Phone Number: (607) 862-3334 ext. 106 Email: lawler@townofmaine.org	
Additional Contributors	
Name/Title: Doug Barton, Assessor Method of Participation: Provided key input in the planning process	
Name/Title: Joseph Dohnalek, Superintendent of Highways Method of Participation: Provided key input in the planning process	
Name/Title: Robert Lawler, Code Enforcer Method of Participation: Provided key input in the planning process and attended meetings	





Primary Point of Contact	Alternate Point of Contact
Name/Title: James Tokos, Supervisor Method of Participation: Provided key input in the planning process	

9.16.2 Municipal Profile

The Town of Maine is located on the western border of Broome County, NY. The Town of Maine has a total area of 45.8 square miles. The Town of Maine is located on the western border of Broome County, NY. Tioga County serves as the town’s western border. The Town is bordered by the Town of Nanticoke to the north, the Town of Barker to the northeast, the Town of Chenango to the east, and the Town of Union to the south (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Maine was 5,168, a 3.9 percent decrease from the 2010 Census.

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 2020 U.S. Census indicates that 6 percent of the population is 5 years of age or younger, 22.1 percent is 65 years of age or older, 0 percent is non-English speaking, 16.9 percent is below the poverty threshold, and 17.9 percent is considered disabled.

9.16.3 Jurisdictional Capability Assessment and Integration

The Town of Maine 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Maine to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.





Planning, Legal, and Regulatory Capability and Integration

Table 9.16-2 summarizes the planning and regulatory tools that are available to the Town of Maine. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.16-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	NYS Building Code	State and Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Building code is in place to ensure the preservation of health, safety, and life.				
Zoning/Land Use Code	Yes	Chapter 450, April 11, 1972	Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Pursuant to the authority conferred by Article 16 of the Town Law of the State of New York and to encourage the most appropriate use of land; protect and conserve the value of property; and promote the health, safety, morals, and general welfare of the community, this chapter has been established to regulate the location, use, and occupancy of buildings and the use of land for trade, industry, residence, and other uses; to regulate and limit the height and bulk of buildings and other structures; to regulate and determine the area of yards and other open spaces; to regulate the density of population; and for said purposes, to divide the Town into districts; to provide for its enforcement and administration; and to prescribe penalties for the violation of its provisions.				
Subdivision Code	Yes	Chapter 400, July 22, 2000	Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is declared to be the policy of the Planning Board to consider land subdivision plats as part of a plan for the orderly, efficient, and economical development of the Town. This means, among other things, that land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health, or peril from fire, flood, or other menace; that proper provision shall be made for drainage, water supply, sewerage and other needed improvements; that all proposed lots shall be so laid out and of such size as to be in harmony with the development pattern of the neighboring properties; that the proposed streets shall compose a convenient system conforming to the Official Map, if such exists, and shall be properly related to the proposals shown on the Comprehensive Plan, and shall be of such width, grade and location as to accommodate the prospective traffic, to facilitate fire protection and to provide access of fire-fighting equipment to buildings; and that proper provision shall be made for preserving and developing open spaces for parks and playgrounds. The regulations, standards, and procedures contained herein are developed to ensure that subdivision activities in the Town of Maine are consistent with the Comprehensive Plan for the Town.				
Site Plan Code	Yes	Chapter 450 (Article IX)	Local and County	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Each application for site plan review and approval by the Town of Maine Planning Board shall: A. Contain a statement of development intent containing the names and addresses of the owners, developers, and agents, B. Include all the information set forth in this article, and C. Include all the information set forth on the appropriate forms to be provided by the Town of Maine Building and Code Inspector.				
Stormwater Management Code	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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Chapter 284, February 11, 2003	Federal, State, County, and Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: A. Regulate uses which are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities; B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction; C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters; D. Control filling, grading, dredging, and other development which may increase erosion or flood damages; E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and F. Qualify and maintain participation in the National Flood Insurance Program.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Planning Documents				
General/Comprehensive Plan	Yes	2018 Comprehensive Plan	Local	Planning Board
<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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
The Comprehensive Plan provides guidance for the development of properties in the Town of Maine. It also provides for coordination with adjacent agencies.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	Yes	2018 Comprehensive Plan	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The 2018 Plan includes a Town Economic Development Plan which guides the Town in how to manage their budget.				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<i>Consider the following:</i>				
<ul style="list-style-type: none"> • Does the transportation plan limit access to hazard areas? • Is transportation policy used to guide growth to safe locations? • Are transportation systems designed to function under disaster conditions (e.g. evacuation)? 				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan	County	OEM
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Comprehensive Emergency Management Plan addresses communications, evacuations, and necessary housing for the Town population in case of emergency events.				
Continuity of Operations Plan	Yes	Comprehensive Emergency Management Plan	County	OEM
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Comprehensive Emergency Management Plan addresses communications, evacuations, and necessary housing for the Town population in case of emergency events.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.16-3 summarizes the capabilities of the Town of Maine to oversee and track development.

Table 9.16-3. Development and Permitting Capability

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





Indicate if your jurisdiction implements the following	Yes/No	Comment:
Describe the level of build-out in your jurisdiction.	N/A	90%

Administrative and Technical Capability

Table 9.16-4 summarizes potential staff and personnel resources available to the Town of Maine and their current responsibilities that contribute to hazard mitigation.

Table 9.16-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Town of Maine Planning Board – meets as necessary
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals (ZBA) will hear an appeal from a decision by the Building and Code Enforcement Officer to deny a Building Permit.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	Rob Szczepanski Ellis Payne Drive Town Garage Maine Office: (607)862-9209 Cell: (607) 752-1633 email: mainehwy1@hotmail.com
Construction/Building/Code Enforcement Department	Yes	Code enforcement issues building permits and enforces the Town Code.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Department
Mutual aid agreements	Yes	Coordinate with several local municipalities on highway projects.
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Griffiths Engineering Co.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Griffiths Engineering Co.
Planners or engineers with an understanding of natural hazards	Yes	Griffiths Engineering Co.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Office of Emergency Management
Grant writer(s)	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator (FPA)	Yes	Code Enforcement

Fiscal Capability

Table 9.16-5 summarizes financial resources available to the Town of Maine.

Table 9.16-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	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.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.16-6 summarizes the education and outreach resources available to the Town of Maine.

Table 9.16-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-



Outreach Resources	Available? (Yes/No)	Comment:
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	Yes	No additional information is available at this time
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.16-7 summarizes classifications for community programs available to the Town of Maine.

Table 9.16-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.16-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.16-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.16.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.16-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.16-9 summarizes the NFIP statistics for the Town of Maine.

Table 9.16-9. Town of Maine NFIP Summary of Policy and Claim Statistics

# Policies	27
# Claims (Losses)	33
Total Loss Payments	\$1,248,563
# Repetitive Loss Properties (NFIP definition)	6
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics current as of October 2023

Flood Vulnerability Summary

Table 9.16-10 provides a summary of the NFIP program in the Town of Maine.





Table 9.16-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Areas along Nanticoke Creek, particularly on Edson Road and Nanticoke Road.
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Several people are interested in self-help programs if allowed by the DEC
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Seek help from more experienced Code officials
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Procedures need to be developed
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	No, they are out of date
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	How to get NY State help to resolve issues
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	None
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	Seek help from more experienced Code officials
What are the barriers to running an effective NFIP program in the community, if any?	Creek is a designated trout stream, which limits actions
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	2019



NFIP Topic	Comments
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 284
What is the date that your flood damage prevention ordinance was last amended?	February 11, 2003
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, flood zones are taken into account before permits are issued.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Yes

9.16.5 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 9.16-11 through Table 9.16-13.

Table 9.16-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	3	0	4	7
Permits within SFHA	0	0	0	0
2020				
Total Permits	4	0	4	8
Permits within SFHA	0	0	0	0
2021				
Total Permits	3	0	3	6
Permits within SFHA	0	0	0	0
2022				
Total Permits	3	0	4	7
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	2	2
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)



Table 9.16-12. Recent Major Development and Infrastructure from 2018 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
None Identified					

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

Table 9.16-13. 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
Above Grid Solar Project	Commercial	Field of Solar Panels	2488 Airport Road	Wildfire Intermix	Anticipated within 5 Years

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

9.16.6 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 Town of Maine’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

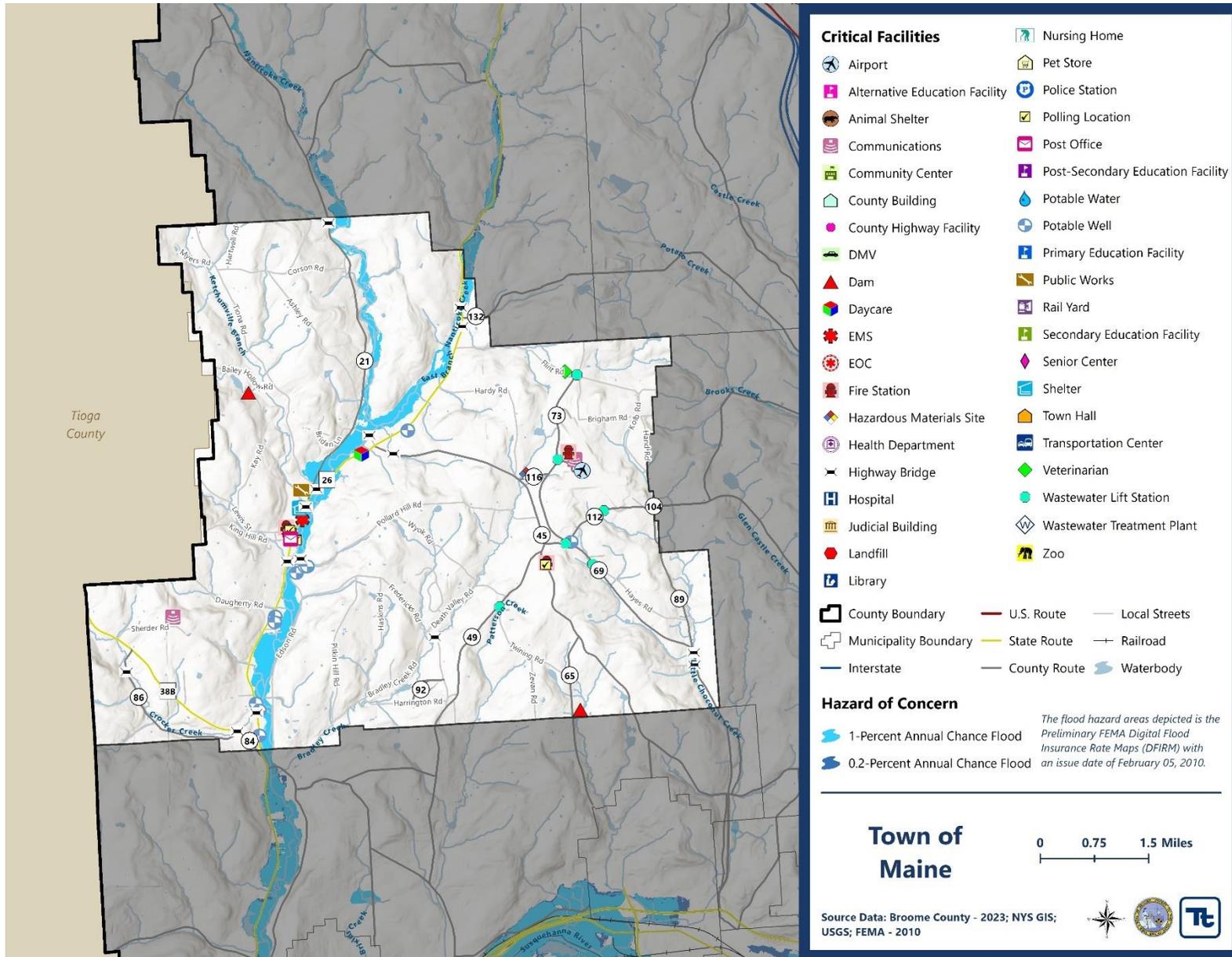
Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.16-1 through Figure 9.16-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Maine has significant exposure. The maps show the location of potential new development, where available.



SECTION 9.16. Town of Maine

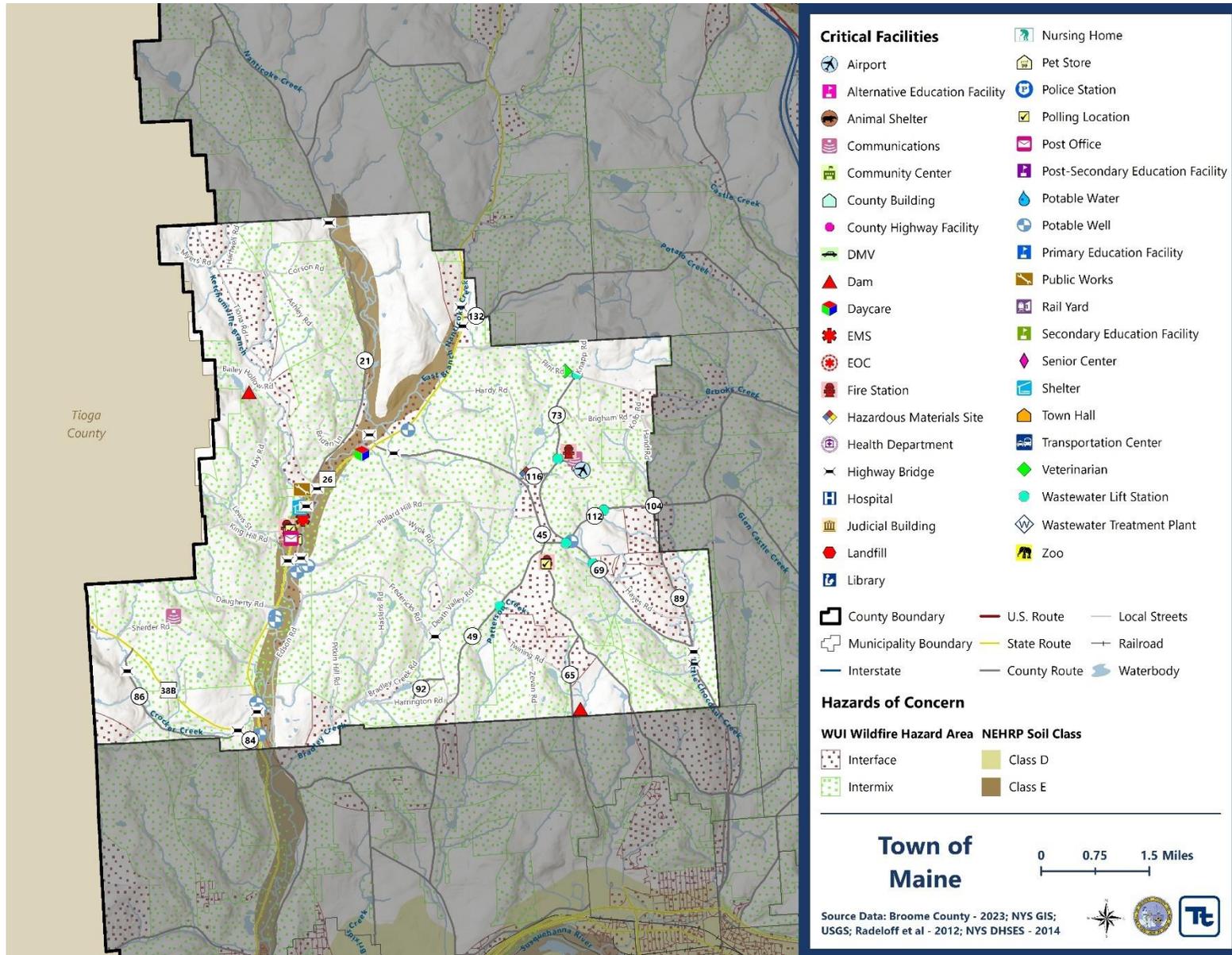
Figure 9.16-1. Town of Maine Flood Hazard Area Extent and Location Map





SECTION 9.16. Town of Maine

Figure 9.16-2. Town of Maine NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Maine is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.16-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.16-14. Hazard Event History in the Town of Maine

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	The Town did not experience any additional damages or losses.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town did not experience any additional damages or losses.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Town did not experience any additional damages or losses.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	The Town did not experience any additional damages or losses.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Maine.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Maine 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 Town indicated the following:

- The Town agreed with the below hazard rankings.

Table 9.16-15 shows Maine’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.16-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.16-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.16-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
SOUTH WELL #1	Potable Well	X	X	Action 2024-MaineT-07	-
Bridge_1018500	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1018510	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1095160	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_2225630	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.



Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_3349550	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_3349670	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

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

- Little Choconut Site 1A Dam
- Little Choconut Site 2b Dam
- Little Choconut Site 2c Dam
- Little Choconut Site 2e Dam
- Nanticoke Creek Site 13 Dam
- Nanticoke Creek Site 7a Dam

Identified Issues

After review of the Town of Maine’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Maine identified the following vulnerabilities within their community:

- Nanticoke Creek runs through the Town of Maine with several homes and the Oakwoods Mobile Home Park that are close to the creek, and some are in the flood plain. The NYS DEC and the Army Corps of Engineers will not consider dredging the creek to lessen the chance of flooding. The homes that are near the creek but not in the flood plain are still endangered due to erosion of the creek bank. There are types of permits that allow individual landowners to modify the creek bed or reinforce the bank to prevent further erosion, but they are hard to get with a long lead time. The Town needs a streamlined method for flood mitigation.
- The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality needs a formal process and plans to provide a framework for conducting such inspections and determinations.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has one repetitive loss property, but other properties may be impacted by flooding as well.





- There is flooding at Baily Hollow Road due potential overtopping of a County-owned dam. This road is a critical emergency route for 8-10 homes and lack of access to the road would displace these residents.
- There are critical facilities in the Town which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
- The Town has potential impacts from six high-hazard potential dams (Little Choconut Site 1A, Little Choconut Site 2b, Little Choconut Site 2c, Little Choconut Site 2e, Nanticoke Creek Site 13, Nanticoke Creek Site 7a). These structures have the potential to impact those living nearby.
- The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.
- Several town and state roads are subject to flash flooding resulting in road closures. NYS Route 26 overtops resulting in road closure and cut-off access to the Town Highway Department.

*This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.

9.16.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.16-17 indicates progress on the Town'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 9.16-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Maine-1	Baily Hollow Road/Dam Engineering Assessment	Flood	Town Supervisor	Overtopping of County owned Dam results in flooding and closure of Baily Hollow Road. Baily Hollow Road is a critical emergency route for 8-10 homes.	<ol style="list-style-type: none"> 1. No Progress 2. Issue of funding 	<ol style="list-style-type: none"> 1. Include 2. Baily Hollow Road is an emergency route for 8-10 homes.
T. Maine-2	Local flood analysis (LFA) study	Flood	Town Supervisor	Several Town roads are subject to flash flooding resulting in road closures. NYS Rte. 26 overtopping results in road closure and cuts off access to the Town Highway Department.	<ol style="list-style-type: none"> 1. No Progress 2. Issue of funding 	<ol style="list-style-type: none"> 1. Include 2. Flooding issues prevalent along Town and State-owned roads.
T. Maine-3	Protect South Well #1 to the 500-year flood level	Flood	Facilities manager, Town	The Well is in the 100-year floodplain	<ol style="list-style-type: none"> 1. No Progress 2. Issue of funding 	<ol style="list-style-type: none"> 1. Include 2. South Well #1 is a critical facility in the floodplain.
T. Maine-4	Protect the Oakwoods Mobile Home Park from the 500-year flood level	Flood	Town Floodplain Administrator working with facility operators/owners	The Oakwoods Mobile Home Park is located in the 100-year floodplain. The Town does not have jurisdiction over the facility and cannot mitigate themselves.	<ol style="list-style-type: none"> 1. No Progress 2. Issue of permitting and flood location 	<ol style="list-style-type: none"> 1. Include 2. The mobile home park is located within the floodplain.
T. Maine-5	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	The current flood damage prevention ordinance (2003) does not include NYS freeboard requirements.	<ol style="list-style-type: none"> 1. No Progress 2. Lack of staffing 	<ol style="list-style-type: none"> 1. Include 2. The Flood Damage Prevention Ordinance is out of date.



Proposed Hazard Mitigation Initiatives for the HMP Update

Maine participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Maine 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 the Town’s priorities.

Table 9.16-18 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. Table 9.16-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.16-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	X	-	X	X	X	X	-	-	X
Disease Outbreak	-	-	-	X	-	-	X	-	-	-
Drought	X	-	-	X	X	-	X	-	-	X
Earthquake	X	-	-	X	X	-	X	-	-	X
Extreme Temperature	X	-	-	X	X	-	X	-	-	X
Flood	X	X	X	X	X	X	X	X	X	X
Invasive and Nuisance Species	X	-	-	X	-	-	X	-	-	X
Severe Storm	X	X	X	X	X	X	X	X	X	X
Severe Winter Storm	X	X	X	X	X	X	X	X	X	X
Wildfire	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 stormwater 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 9.16-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-MaineT-01	Local Flood and Erosion Mitigation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
Action 2024-MaineT-02	Substantial Damage Response Plan	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
Action 2024-MaineT-03	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Action 2024-MaineT-04	Debris Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
Action 2024-MaineT-05	Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
Action 2024-MaineT-06	Emergency Dam Evacuation Route	1	0	1	1	1	1	1	0	1	1	0	1	1	0	10	High
Action 2024-MaineT-07	Critical Facilities in the Floodplain	1	1	1	1	1	0	0	1	1	0	1	1	1	0	10	Medium
Action 2024-MaineT-08	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
Action 2024-MaineT-09	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
Action 2024-MaineT-10	Flood Study of Town and State Roads	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High

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



Action 2024-MaineT-01. Local Flood and Erosion Mitigation

Action Name:	Action 2024-MaineT-01. Local Flood and Erosion Mitigation	
Description of the Problem:	Nanticoke Creek runs through the Town of Maine with several homes and the Oakwoods Mobile Home Park that are close to the creek, and some are in the flood plain. The NYS DEC and the Army Corps of Engineers will not consider dredging the creek to lessen the chance of flooding. The homes that are near the creek but not in the flood plain are still endangered due to erosion of the creek bank. There are types of permits that allow individual landowners to modify the creek bed or reinforce the bank to prevent further erosion, but they are hard to get with a long lead time. The Town needs a streamlined method for flood mitigation.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The NYS DEC or the Corps of Engineers will complete a survey of the condition of Nanticoke Creek and other flooded areas within the Town. This survey will be referenced by landowners when a request is made to modify the creek bank to prevent erosion and flooding. This will help the landowner to know what can be done, and how it can be done. It is a request for a process to expedite permits that allow the landowners to do the work.	
Lead Agency:	Code Enforcement Office/Floodplain Manager	
Supporting Agencies:	NYSDEC; US Army Corps of Engineers	
Estimated Cost:	\$100,000	
Potential Funding Sources:	<i>HMPG, FMA, BRIC, Municipal Budget</i>	
Implementation Timeline:	1, 2, 3, 4	
Goals Met:	<i>Tetra Tech will address</i>	
Benefits:	Implementation of such a project would help to mitigate the danger of individual residences being damaged or destroyed by flooding and water erosion. The risk of destruction will greatly be reduced.	
Mitigation Action Type: <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input checked="" type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input checked="" 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)
Impact on Socially Vulnerable Populations:	Risk is reduced because there will be a basis for the possible issuance of permits that local landowners can use to do the applicable work themselves. Some owners may be economically disadvantaged and	





	need the support of an already completed flood study to apply for additional funding.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action would improve the Town’s capability to handle flooding issues.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of precipitation.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		-
	Install Flood Barriers.		The Town is unaware of what areas would need a flood barrier.
	Install and upgrade storm drains.		A study would be needed to address what areas need additional or improved storm sewer systems.



Action 2024-MaineT-02. Substantial Damage Response Plan

Action Name:	Action 2024-MaineT-02. Substantial Damage Response Plan	
Description of the Problem:	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"> • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for “market value” and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure’s pre-damage value. • Require permits for floodplain development. <p>The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plans to provide a framework for conducting such inspections and determinations.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	<p>The municipality will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Public Works	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan.	
Goals Met:	1	
Benefits:	This plan will provide a process for making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.	





Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliant with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.	
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.	
Impact of Capabilities:	This action improves disaster recovery capabilities.	
Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future developments in the municipality.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides additional planning for disaster recovery.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action.	-
	Rely on state or federal resources following disaster events.	Resources may not be available during major widespread events.
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations.	A plan outlining responsibility is still necessary to prevent missing important requirements.



Action 2024-MaineT-03. StormReady Program Participation

Action Name:	Action 2024-MaineT-03. StormReady Program Participation	
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will coordinate with the local NWS office to complete all necessary requirements to become a StormReady community.	
Lead Agency:	Public Works	
Supporting Agencies:	Town Administration	
Estimated Cost:	Staff Time	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 2,3	
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
CRS Category: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.	
Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.	
Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and 	





	<p>issue timely and effective warnings ahead of severe weather events.</p> <ul style="list-style-type: none"> StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 		
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.		
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		-
	Increase warning system capabilities without StormReady guidance.		No CRS points would be available. Less public awareness and support from NWS.
	Hire a third party to conduct emergency warning system improvements.		Costly. No CRS points would be available. Less public awareness and support from NWS.



Action 2024-MaineT-04. Debris Management Plan

Action Name:	Action 2024-LisleV-04. Debris Management Plan	
Description of the Problem:	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for the execution of the plan. The plan will align with permitted temporary collection areas.	
Lead Agency:	Public Works	
Supporting Agencies:	Broome County	
Estimated Cost:	Staff Time	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1	
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	The action will result in increased post-disaster capabilities.	





Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		-
	Rely on federal cleanup.		These services may or may not be available.
	Rely on state cleanup.		These services may or may not be available.



Action 2024-MaineT-05. Repetitive Loss Properties

Action Name:	Action 2024-MaineT-05. Repetitive Loss Properties	
Description of the Problem:	Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has one repetitive loss property, but other properties may be impacted by flooding as well.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Conduct outreach to 10 flood-prone property owners, including RL/SRL property owners, 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).	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Public Works	
Estimated Cost:	Staff Time	
Potential Funding Sources:	HMGP, BRIC, FMA, Broome County, Annual Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 5	
Benefits:	Eliminates flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
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 Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	





Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
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.		
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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		-
	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 2024-MaineT-06. Emergency Dam Evacuation Route

Action Name:	Action 2024-MaineT-06. Emergency Dam Evacuation Route		
Description of the Problem:	There is flooding at Baily Hollow Road due potential overtopping of a County-owned dam. This road is a critical emergency route for 8-10 homes and lack of access to the road would displace these residents.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct a flood study to determine the best practices to prevent or reduce flooding at Baily Hollow Road to ensure that the critical emergency route is available.		
Lead Agency:	Public Works		
Supporting Agencies:	Broome County OEM		
Estimated Cost:	TBD after Study		
Potential Funding Sources:	<i>HMGP, BRIC, FMA, County Budget, Municipal Budget</i>		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	The residents will continue to have access to their homes and emergency responders will also have access to their homes.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may reside in the impacted homes and are unaware of the issues.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action would improve the Town’s capabilities to evacuate in an emergency.		
Impact on Future Development:	Any future development along Baily Hollow Road will have an evacuation route identified.		
Climate Change Considerations:	Climate change is leading to an increase in the intensity and frequency of precipitation events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action.	-
	Identify other routes.	Other routes may be unavailable or need to be constructed.
	Remove the Dam.	Removing a dam is expensive and not cost-effective.





Action 2024-MaineT-07. Critical Facilities in the Floodplain

Action Name:	Action 2024-MaineT-07. Critical Facilities in the Floodplain	
Description of the Problem:	There are critical facilities in the Town which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Coordinate with the facility manager at South Well #1 to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify the most cost-effective mitigation option. Phase 2: Work with the facility manager to implement selected action based on available funding and local match ability.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Town Administration, Facility Managers	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Town Budget, Private Owners	
Implementation Timeline:	5 years	
Goals Met:	1, 3, 5	
Benefits:	This action will remove or reduce critical facility and community lifeline vulnerability to flood hazards and remove or reduce safety risks for first responders.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.	
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	





Impact of Capabilities:	This action will enhance the Town’s current NFIP capabilities.		
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.		
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. As sea level rises due to climate change, the area of the flood hazard may expand.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		The current problem continues.
	Floodproof existing structures.		May not necessarily reduce the risk.
	Construct floodwalls to stop flood issues.		Will most likely interrupt natural floodplain function.



Action 2024-MaineT-08. Dam Owner Partnership

Action Name:	Action 2024-MaineT-08. Dam Owner Partnership	
Description of the Problem:	The Town has potential impacts from six high-hazard potential dams (Little Choconut Site 1A, Little Choconut Site 2b, Little Choconut Site 2c, Little Choconut Site 2e, Nanticoke Creek Site 13, Nanticoke Creek Site 7a). These structures have the potential to impact those living nearby.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Work with the owners of the dams to ensure inspections and safety procedures are up to date. Identify mitigation actions to ensure the integrity of the dams and that it is protected up to the 0.2-percent flood hazard area.	
Lead Agency:	Town Administration	
Supporting Agencies:	Dam Owners, NYSDEC	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 4, 5	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
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 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.	
Impact of Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.	
Impact on Future Development:	Not applicable	





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. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No Action.	The town will be unaware of any safety concerns for the dam or its condition.	
	Utilize information from NYSDEC.	Owners may not be required to submit a safety plan to the State.	
	Utilize information from the National Inventory of Dams.	Not all dams are listed on the inventory.	



Action 2024-MaineT-09. Socially Vulnerable Populations Outreach

Action Name:	Action 2024-MaineT-09. Socially Vulnerable Populations Outreach	
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.	
Lead Agency:	Town Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	



Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.



Action 2024-MaineT-10. Flood Study of Town and State Roads

Action Name:	Action 2024-MaineT-10. Flood Study of Town and State Roads	
Description of the Problem:	Several Town and state roads are subject to flash flooding resulting in road closures. NYS Route 26 overtops resulting in road closure and cut-off access to the Town Highway Department.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town and partnering agencies will begin working with the United States Army Corps of Engineers (USACE) to identify potential mitigation actions to reduce the occurrence of flooding and flood risk along roads located in the Town when floods do occur. Once identified, cost-effective actions will be carried out.	
Lead Agency:	Highway Department, USACE	
Supporting Agencies:	FEMA, Broome County Administration, NYS	
Estimated Cost:	TBD after Study	
Potential Funding Sources:	HMGP, BRIC, FMA, Annual Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 4,5	
Benefits:	<ul style="list-style-type: none"> Flood risk will be reduced in hazard-prone areas. Vulnerable communities will be identified ahead of a flood event, which will allow first responders to plan and stage resources in those areas. Future mitigation projects may be identified that will further increase overall community resiliency to flooding and other hazard events. 	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	<ul style="list-style-type: none"> Areas vulnerable to flooding will be made aware to Town leadership and first responders which can place an emphasis on controlled future development. If cost-effective mitigation actions are identified, they may be implemented in flood-prone areas that could reduce their overall risk of loss of life and property. 	
Impact on Critical Facilities/Lifelines:	<ul style="list-style-type: none"> Transportation routes will be more likely to remain open if flooding is mitigated along them. 	





	<ul style="list-style-type: none"> Hydration systems may remain potable for community usage if projects are identified to protect the existing infrastructure from flooding. 		
Impact of Capabilities:	This study will identify opportunities for mitigation funding to be spent in the areas in which it is most needed to increase resiliency and decrease damage from flood events.		
Impact on Future Development:	<ul style="list-style-type: none"> Flood insurance costs may decrease in houses along flood-prone roads. 		
Climate Change Considerations:	Consideration should be taken to ensure any projects conducted have accounted for increased extreme rainfall events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Current methods remain the only ones used.
	Moveable flood-barriers.		In order to cover all of the impacted flood areas, a lot of flood barriers would need to be purchased. Not cost-effective.
	Elevate roads out of flood areas.		Elevating all roads impacted is not cost-effective.



SECTION 9.

9.17 TOWN OF NANTICOKE

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

9.17.1 Hazard Mitigation Planning Team

The Town of Nanticoke identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.17-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.17-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Roy Willis, Supervisor Address: 755 Cherry Valley Hill Road, Maine, NY 13802 Phone Number: 607-692-4041, Ext. 26 Email: supervisor@townofnanticokeny.com	Name/Title: Scott Whittaker, Town Councilman Address: 755 Cherry Valley Hill Road, Maine, NY 13802 Phone Number: 607-343-9520; 607-692-3479 Email: whittfarm@aol.com
NFIP Floodplain Administrator	
Name/Title: Shaun Oliver, Code Enforcement Address: 755 Cherry Valley Hill Road, Maine, NY 13802 Phone Number: N/A Email: N/A	
Additional Contributors	
Name/Title: Roy Willis, Supervisor Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Scott Whittaker, Town Councilman Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Robert Hoag, Highway Superintendent Method of Participation: Provided key input in the planning process and attended meetings	





Primary Point of Contact	Alternate Point of Contact
Name/Title: Nicholas Collyer, Glen Aubrey Fire Company Method of Participation: Provided key input in the planning process	
Name/Title: Renny Zanker, Town Clerk Method of Participation: Provided key input in the planning process	
Name/Title: Shaun Oliver, Building Inspector Method of Participation: Provided key input in the planning process	
Name/Title: Sue Williams, Deputy Clerk Method of Participation: Provided key input in the planning process	

9.17.2 Municipal Profile

The Town of Nanticoke is located on the western border of Broome County, NY. The Town of Nanticoke has a total area of 24.4 square miles. The Town of Nanticoke is located on the western border of Broome County, NY. Tioga County serves as the town’s western border and the New York State Route 26 is a north-south highway in the Town. The Town is also bordered by the Town and Village of Lisle to the north, the Town of Triangle to the northeast, the Town of Barker to the east, and the Town of Maine to the south. Nanticoke Creek flows southward from the town to the Susquehanna River. Greenwood Park, a County Park, is found near the west town line. The Town includes the hamlets and communities of Glen Aubrey, Nanticoke, and Nanticoke Springs. Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Nanticoke is governed by a Supervisor and a Town Council made up of four Council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Nanticoke was 1,581, a 5.4 percent decrease from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 4.3 percent of the population is 5 years of age or younger, 24.3 percent is 65 years of age or older, 0 percent is non-English speaking, 7.8 percent is below the poverty threshold, and 16.8 percent is considered disabled.

9.17.3 Jurisdictional Capability Assessment and Integration

The Town of Nanticoke 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Nanticoke to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.17-2 summarizes the planning and regulatory tools that are available to the Town of Nanticoke. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.17-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	NYS Uniform Fire Prevention and Building Code	State and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of the building code is to ensure health and safety are made a priority when encouraging development and developmental changes.				
Zoning/Land Use Code	Yes	January 22, 2020	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Zoning Code is used to serve and benefit the public about development. Zoning is also used to ensure the safety of residents by taking into account hazard area locations.				
Subdivision Code	Yes	Local Law of 2006	Local	
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This local law provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in this Town. This local law is adopted pursuant to section 10 of the Municipal Home Rule Law. Except as otherwise provided in the Uniform Code, other state law, or other sections of this local law, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this local law.				
Site Plan Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Real Estate Disclosure	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.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<i>Consider the following:</i>				
<ul style="list-style-type: none"> • Are environmental systems that protect development from hazards identified and mapped? • Do environmental policies maintain and restore protective ecosystems? • Do the ordinances prohibit development within, or filling of, wetlands, floodways, and floodplains? • Do environmental policies provide incentives to development that are located outside protective ecosystems? 				
Flood Damage Prevention Ordinance	Yes	Local Law No. 1. of 1978	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The ordinance establishes regulations for the flood hazard districts in the Town and aims to continue the Town’s eligibility for the NFIP.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Planning Documents				
General/Comprehensive Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<i>Consider the following:</i>				
<ul style="list-style-type: none"> Does your CEMP cover short-term response and long-term recovery to address communications, evacuation, and housing necessary for identified hazards? 				
Continuity of Operations 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.17-3 summarizes the capabilities of the Town of Nanticoke to oversee and track development.

Table 9.17-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Enforcement
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	80%

Administrative and Technical Capability

Table 9.17-4 summarizes potential staff and personnel resources available to the Town of Nanticoke and their current responsibilities that contribute to hazard mitigation.

Table 9.17-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Michael Holden is head of the Planning Board.
Zoning Board of Adjustment	No	-





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	Robert Hoag - Highway Superintendent
Construction/Building/Code Enforcement Department	Yes	Shaun Oliver - Building Code Enforcement Officer
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	No	-
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	No	-
Engineers or professionals trained in building or infrastructure construction practices	No	-
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.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	Yes	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-



Fiscal Capability

Table 9.17-5 Summarizes financial resources available to the Town of Nanticoke.

Table 9.17-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital improvement project funding	No
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas, or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds.	No
Incur debt through special tax bonds.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.17-6 summarizes the education and outreach resources available to the Town of Nanticoke.

Table 9.17-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-



Community Classifications

Table 9.17-7 summarizes classifications for community programs available to the Town of Nanticoke.

Table 9.17-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other			

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.17-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.17-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate





9.17.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.17-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.17-9 summarizes the NFIP statistics for the Town of Nanticoke.

Table 9.17-9. Town of Nanticoke NFIP Summary of Policy and Claim Statistics

# Policies	9
# Claims (Losses)	3
Total Loss Payments	\$64,297
# Repetitive Loss Properties (NFIP definition)	1
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics current as of October 2023

Flood Vulnerability Summary

Table 9.17-10 provides a summary of the NFIP program in the Town of Nanticoke.

Table 9.17-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	None
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	N/A





NFIP Topic	Comments
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	No
How do you make Substantial Damage determinations?	Procedures need to be developed
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	N/A
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	N/A
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	None
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit Review
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Procedures need to be developed
What are the barriers to running an effective NFIP program in the community, if any?	None
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown
What is the local law number or municipal code of your flood damage prevention ordinance?	Local Law No. 1 of 1978
What is the date that your flood damage prevention ordinance was last amended?	April 20, 1978
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	No



NFIP Topic	Comments
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

9.17.5 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 9.17-11 through Table 9.17-13.

Table 9.17-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2020				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2021				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2022				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2023				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A

SFHA Special Flood Hazard Area (1% flood event)

Table 9.17-12. Recent Major Development and Infrastructure from 2018 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
Rehabilitation of Steel Arch Bridge	Infrastructure	1	Leekville Road	Wildfire Interface	Completed

* Only location-specific hazard zones or vulnerabilities identified.





Table 9.17-13. 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
None Identified					

* Only location-specific hazard zones or vulnerabilities identified.

9.17.6 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 Town of Nanticoke’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

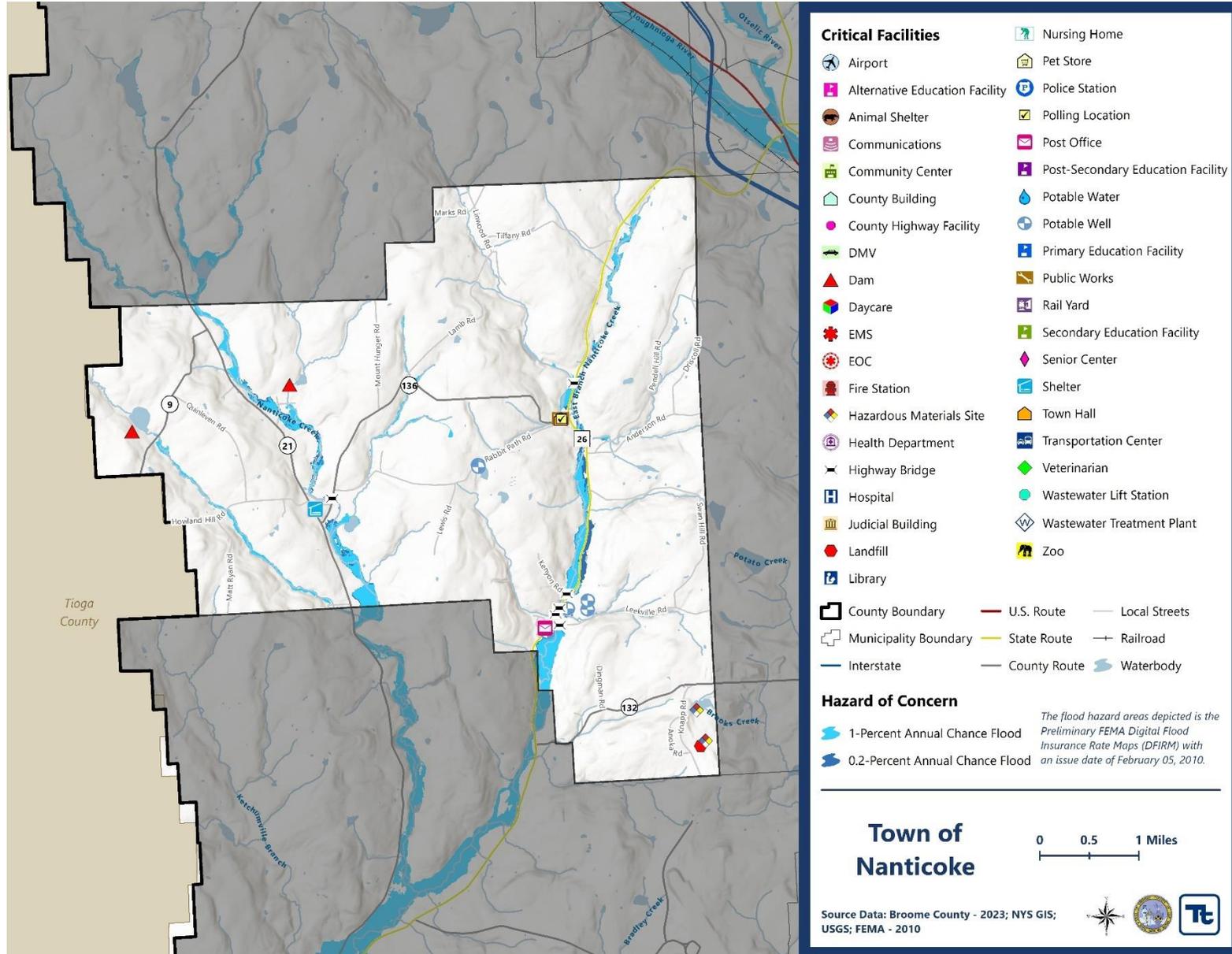
Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.17-1 through Figure 9.17-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which Nanticoke has significant exposure. The maps show the location of potential new development, where available.





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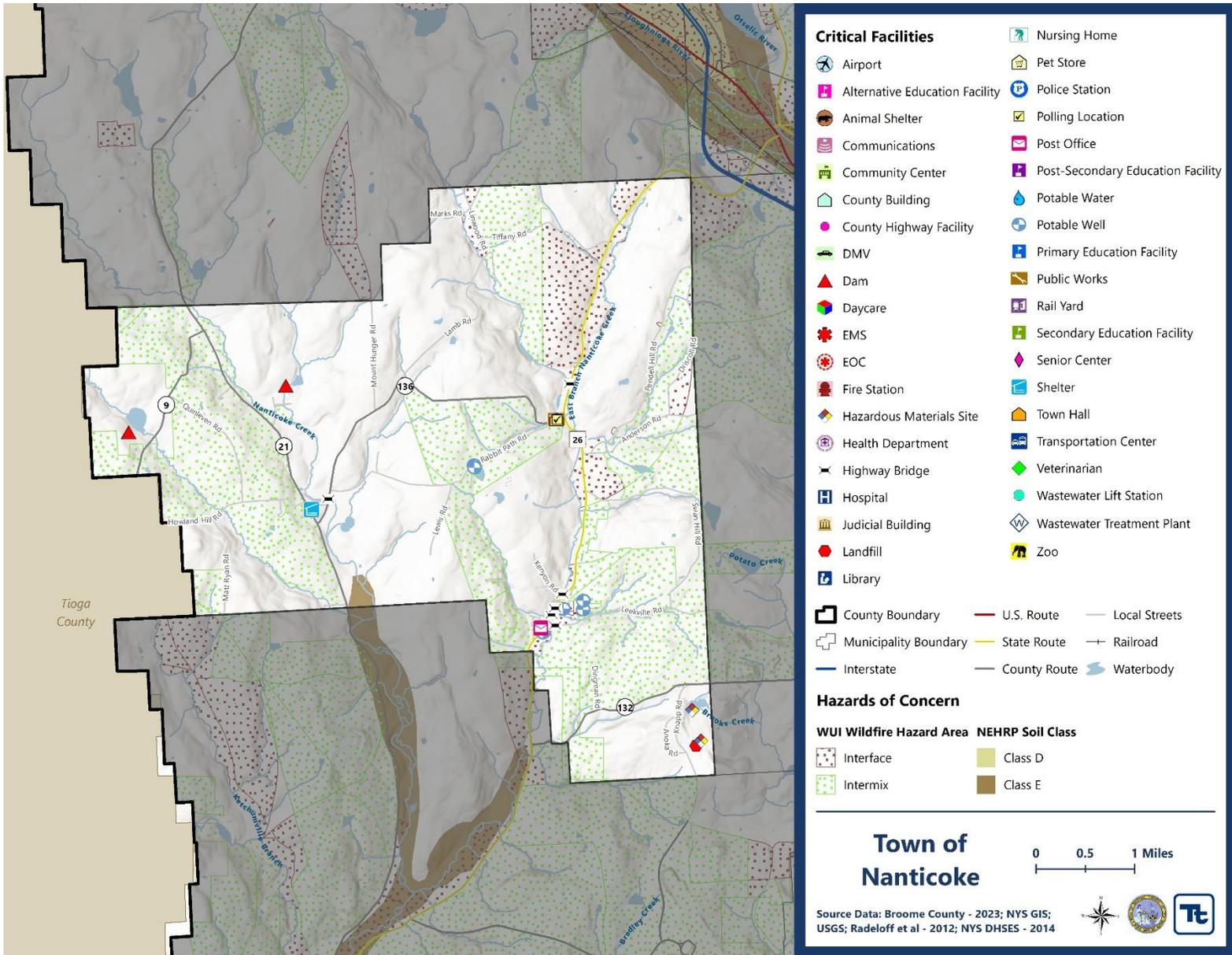
Figure 9.17-1. Town of Nanticoke Flood Hazard Area Extent and Location Map





SECTION 9.17. Town of Nanticoke

Figure 9.17-2. Town of Nanticoke NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Nanticoke is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.17-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.17-14. Hazard Event History in the Town of Nanticoke

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	The Town has not experienced any additional damages or losses.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	Covid Deaths Recorded: 2
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Town has not experienced any additional damages or losses.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	The Town has not experienced any additional damages or losses.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Nanticoke.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Nanticoke 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 Town indicated the following:

- The Town agreed with all hazard rankings.

Table 9.17-15 shows Nanticoke’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.17-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.17-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.17-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_3349570	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_3349590	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

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

- Nanticoke Creek Site 10 Dam



- Nanticoke Creek Site 8 Dam
- Nanticoke Creek Site 9e Dam

Identified Issues

After review of the Town of Nanticoke’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Nanticoke identified the following vulnerabilities within their community:

- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has one repetitive loss properties, but other properties may be impacted by flooding as well.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.
- The Town has potential impacts from two high-hazard potential dams (Nanticoke Creek Site 10, Nanticoke Creek Site 8, and Nanticoke Creek Site 9e). These structures have the potential to impact those living nearby.
- The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.
- The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality needs a formal process and plans to provide a framework for conducting such inspections and determinations.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*

9.17.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.17-17 indicates progress on the Town’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 9.17-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
The Town did not participate in the 2019 Plan.						



Proposed Hazard Mitigation Initiatives for the HMP Update

Nanticoke participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Nanticoke 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 the Town’s priorities.

Table 9.17-18 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. Table 9.17-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.17-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure				X			X			
Disease Outbreak				X			X			
Drought				X			X			
Earthquake				X			X			
Extreme Temperature	X			X			X			X
Flood	X	X		X		X	X			X
Invasive and Nuisance Species				X			X			
Severe Storm	X	X		X		X	X			X
Severe Winter Storm	X	X		X		X	X			X
Wildfire				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 stormwater 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 9.17-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-NanticokeT-01	Repetitive Loss Properties	1	1	1	1	1	1	1	0	0	1	1	1	1	0	11	High
2024-NanticokeT-02	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
2024-NanticokeT-03	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2024-NanticokeT-04	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-NanticokeT-05	Substantial Damage Management Plan	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High

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



Action 2024-NanticokeT-01. Repetitive Loss Properties

Action Name:	Action 2024-NanticokeT-01. Repetitive Loss Properties	
Description of the Problem:	Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has one repetitive loss properties, but other properties may be impacted by flooding as well.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Conduct outreach to 10 flood-prone property owners, including RL/SRL property owners, 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 flood-prone areas that experience frequent flooding (high-risk areas).	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Public Works, FEMA	
Estimated Cost:	Staff Time	
Potential Funding Sources:	HMGP, BRIC, FMA, Broome County, Annual Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 5	
Benefits:	Eliminates flood damage to homes and residences, creating an open space for the municipality and increasing flood storage.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
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 Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.	
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.	
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	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 2024-NanticokeT-02. StormReady Program Participation

Action Name:	Action 2024-NanticokeT-02. StormReady Program Participation		
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will coordinate with the local NWS office to complete all necessary requirements to become a StormReady community.		
Lead Agency:	Public Works		
Supporting Agencies:	Broome County, FEMA		
Estimated Cost:	Staff Time		
Potential Funding Sources:	Municipal Budget		
Implementation Timeline:	Within 5 Years		
Goals Met:	1, 2,3		
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.		
Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.		
Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and issue timely and effective warnings ahead of severe weather events. StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 		
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.		
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action	-
	Increase warning system capabilities without StormReady guidance	No CRS points would be available. Less public awareness and support from NWS.
	Hire third party to conduct emergency warning system improvements	Costly. No CRS points would be available. Less public awareness and support from NWS.



Action 2024-NanticokeT-03. Dam Owner Partnership

Action Name:	Action 2024-Nanticoke-03. Dam Owner Partnership		
Description of the Problem:	The Town has potential impacts from two high-hazard potential dams (Nanticoke Creek Site 10, Nanticoke Creek Site 8, and Nanticoke Creek Site 9e). These structures have the potential to impact those living nearby.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Work with the owners of the dams to ensure inspections and safety procedures are up to date. Identify mitigation actions to ensure the integrity of the dams and that it is protected up to the 0.2-percent flood hazard area.		
Lead Agency:	Town Administration		
Supporting Agencies:	Dam Owners, NYSDEC		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 3, 4, 5		
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.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
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 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.		
Impact of Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.		
Impact on Future Development:	Not applicable		
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. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Town will be unaware of any safety concerns for the dam or its condition
	Utilize information from NYSDEC		Owners may not be required to submit a safety plan to the State
	Utilize information from the National Inventory of Dams		Not all dams are listed on the inventory





Action 2024-NanticokeT-04. Socially Vulnerable Populations Outreach

Action Name:	Action 2024-NanticokeT-04. Socially Vulnerable Populations Outreach		
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness on hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget, HMGP		
Implementation Timeline:	Within 3 years		
Goals Met:	1, 2, 3		
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards risks. The Town will identify an individual to identify and work with these populations to ensure the most up to date information is being shared.		
Impact on Critical Facilities/Lifelines:	Educating populations on hazard risk and how to mitigate the risks can decrease the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No action	Current methods remain the only ones used
	Rely on state or federal resources	Resources may be generalized and not specific to the risks in the Town
	Use only a few methods for distribution	Using only a few methods of distribution may hinder socially vulnerable populations from receiving the guidance



Action 2024-Nanticoke-05. Substantial Damage Management Plan

Action Name:	Action 2024-Nanticoke-05. Substantial Damage Management Plan	
Description of the Problem:	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"> • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for “market value” and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure’s pre-damage value. • Require permits for floodplain development. <p>The municipality does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	<p>The municipality will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Town Administration	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan	
Goals Met:	1	
Benefits:	This plan will provide a process in making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliance with current codes. Socially vulnerable populations may not have the financial means to	





	make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.		
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.		
Impact of Capabilities:	This action improves disaster recovery capabilities.		
Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future development in the municipality.		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action provides additional planning for disaster recovery.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on state or federal resources following disaster events		Resources may not be available during major widespread events
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations		A plan outlining responsibility is still necessary to prevent missing important requirements



SECTION 9.

9.18 VILLAGE OF PORT DICKINSON

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

9.18.1 Hazard Mitigation Planning Team

The Village of Port Dickinson identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Village departments. The Mayor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.18-1 summarizes Village officials who participated in the development of the annex and what capacity. Additional documentation of the Village’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.18-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Kevin Burke, Mayor Address: 786 Chenango Street Binghamton, N.Y. 13901-1845 Phone Number: 607-723-5674 Email: kburke7@stny.rr.com	Name/Title: Robert Moss, Trustee Address: 786 Chenango Street Binghamton, N.Y. 13901-1845 Phone Number: 607-209-8215 Email: rmoss@stny.rr.com
NFIP Floodplain Administrator	
Name/Title: Ron Lake, P.E., Village Engineer Address: 786 Chenango Street Binghamton, N.Y. 13901-1845 Phone Number: 607-343-8937 Email: ronbert18@stny.rr.com	
Additional Contributors	
Name/Title: Kevin Burke, Mayor Method of Participation: Provided key input in the planning process	
Name/Title: Robert Moss, Trustee Method of Participation: Provided key input in the planning process	
Name/Title: Ron Lake, P.E., Village Engineer	





Primary Point of Contact	Alternate Point of Contact
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Gene Hulbert Jr., Engineer	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: John Broughton, Code Enforcement Officer	
Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: James DeGennaro, Code Commissioner of Public Safety	
Method of Participation: Provided key input in the planning process	
Name/Title: Michael Cashman, Trustee	
Method of Participation: Provided key input in the planning process	
Name/Title: Rachelle Tokos, Executive Administer	
Method of Participation: Provided key input in the planning process	
Name/Title: Robert Warholic, Trustee	
Method of Participation: Provided key input in the planning process	
Name/Title: Scott McDonald, Police Chief	
Method of Participation: Provided key input in the planning process	
Name/Title: Sue Fox, Village Clerk	
Method of Participation: Provided key input in the planning process	

9.18.2 Municipal Profile

The Village of Port Dickinson is located within the Town of Dickinson in Broome County, NY. The Village of Port Dickinson has a total area of 0.7 square miles. The Village of Port Dickinson is located within the Town of Dickinson in Broome County, NY. The Town of Fenton and Hillcrest border Port Dickinson to the north, the City of Binghamton to the south, the Chenango River to the west, and the Town of Kirkwood to the east. Home rule is strong in New York State and thus, each town and village has its own governing body. The Village of Port Dickinson is governed by a mayor and four Trustees (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Village of Port Dickinson was 1,699, a 3.5 percent increase from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 4.5 percent of the population is 5 years of age or younger, 13.8 percent is 65 years of age or older, 1.5 percent is non-English speaking, 13.1 percent is below the poverty threshold, and 12.2 percent is considered disabled.

9.18.3 Jurisdictional Capability Assessment and Integration

The Village of Port Dickinson 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Village of Port Dickinson to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.18-2 summarizes the planning and regulatory tools that are available to the Village of Port Dickinson. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.18-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 26, January 2023	State and Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This chapter provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in the Village of Port Dickinson ("Village"). This chapter is adopted pursuant to Section 10 of the Municipal Home Rule Law. Except as otherwise provided in the Uniform Code, the Energy Code, or other state law, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this chapter.				
Zoning/Land Use Code	Yes	Chapter 65, August 18, 1974	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Zoning Code is designed to preserve the safety and health of residents by taking into account hazard areas.				
Subdivision Code	Yes	Chapter 53, May 1975	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Whenever any subdivision of land, as hereinbefore defined, is proposed to be made and before any contract for the sale of or any offer to sell such subdivision or any part thereof is made, the subdivider shall apply in writing to the Planning Board for the approval of such subdivision.				
Site Plan Code	Yes	Chapter 65-20, August 18, 1974	Local and County	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Notwithstanding other provisions of this chapter, a site plan shall be reviewed by the Planning Board and approved in writing thereon before a building permit is issued in all instances hereinafter stated, for the purpose of ensuring that the public				





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	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
welfare will be safeguarded by safe, adequate, and sufficient ingress, egress, off-street parking and loading, surface water runoff control and open spaces required by this chapter.				
Stormwater Management Code	Yes	Local Law #2 of 2007	Local	Town Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this law is to provide for the health, safety, and general welfare of the citizens of the Village of Port Dickinson through the regulation of non-stormwater discharges to the Municipal Separate Storm Sewer System (MS4) to the maximum extent practicable as required by federal and state law. This law establishes methods for controlling the introduction of pollutants into the MS4 to comply with the requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems. The objectives of this law are:</p> <p>A. To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit No. GP-02-02 or as amended or revised;</p> <p>B. To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process, or discharge non-stormwater wastes;</p> <p>C. To prohibit Illicit Connections, Activities, and Discharges to the MS4;</p> <p>D. To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this law; and</p> <p>E. To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment, and other pollutants into the MS4.</p>				
Post-Disaster Recovery/ Reconstruction Code	Yes	N/A	Local	Town Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Post Disaster Recovery Code lays out how the Village will handle hazard events.</p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>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.</p>				
Growth Management	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Environmental Protection Ordinance(s)	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Flood Damage Prevention Ordinance	Yes	Local Law #2 of 1987	Federal, State, County, and Local	Town Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>It is the purpose of this Local Law to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:</p> <p>1) Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;</p>				





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	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction 3) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters; 4) Control filling, grading, dredging, and other development which may increase erosion or flood damages; 5) Regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands, and; 6) Qualify and maintain for participation in the National Flood Insurance Program.				
Wellhead Protection	Yes	Chapter 63, April 11, 2023	Local	Village Administration
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose and intent of establishing wellhead, aquifer recharge, and watershed protection areas is to minimize the potential for contamination of the aquifer which supplies or in the future may supply water to users in the Village of Port Dickinson, and thereby protect and maintain groundwater quality in the protection zones tributary to the Town of Kenton's Hillcrest Water District well field that supplies water to the Village of Port Dickinson, to protect the general health and safety of the residents of the Village of Port Dickinson.				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	State-mandated BFE+2 for all construction, both residential and non-residential NYS Code, 2011	State, Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A freeboard of two feet is added where the design flood elevation or other elevation requirements are specified.				
Other: Municipal Separate Storm Sewer System (MS4)	Yes	EPA, DEC	Federal, State, Local	Engineer
Planning Documents				
General/Comprehensive Plan	Yes	N/A	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Plan lays out the development and structure of the Village.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				





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	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Watershed Management or Protection Plan	Yes	EPA & DEC	Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This plan focuses on the protection and management of water, including drought events.				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Comprehensive covers short-term and long-term response and addresses communications, evacuation, and housing concerns.				
Continuity of Operations Plan	Yes	Emergency Operation Plan	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Substantial Damage Response 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	N/A	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.18-3 summarizes the capabilities of the Village of Port Dickinson to oversee and track development.

Table 9.18-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	The Building Inspector performs a site visit prior to issuing a permit.
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	90%

Administrative and Technical Capability

Table 9.18-4 summarizes potential staff and personnel resources available to the Village of Port Dickinson and their current responsibilities that contribute to hazard mitigation.

Table 9.18-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board helps to support the Highway Department and Code Enforcement.
Zoning Board of Adjustment	Yes	The Zoning Board helps to ensure the Zoning Code is being followed.





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Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Village Department of Public Works has two full-time employees, and their jobs are to maintain the village streets by snow plowing and sanding in the winter, normal road maintenance (patching, etc.), leaf and lawn debris pickup, park maintenance, water, and sewer maintenance.
Construction/Building/Code Enforcement Department	Yes	Along with new construction, various types of upgrades, alterations, and other home repairs require a building permit. Contact the Code Enforcement Officer to find out if a project will require a building permit prior to starting work.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Department
Mutual aid agreements	Yes	Town Board
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other		
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Mayor
Engineers or professionals trained in building or infrastructure construction practices	Yes	Mayor
Planners or engineers with an understanding of natural hazards	Yes	Mayor
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments.	Yes	Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Mayor
Grant writer(s)	Yes	Hired out
Resilience Officer	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Other (NFIP Floodplain Administrator (FPA))	Yes	Code

Fiscal Capability

Table 9.18-5 summarizes financial resources available to the Village of Port Dickinson.

Table 9.18-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds.	Yes
Incur debt through special tax bonds.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.18-6 summarizes the education and outreach resources available to the Village of Port Dickinson.

Table 9.18-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	Yes	Fire Company
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-





Outreach Resources	Available? (Yes/No)	Comment:
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.18-7 summarizes classifications for community programs available to the Village of Port Dickinson.

Table 9.18-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:
 N/A Not applicable
 - Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.18-8 summarizes the adaptive capacity for each identified hazard of concern and the Village’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 9.18-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate





Hazard	Adaptive Capacity - Strong/Moderate/Weak
Severe Winter Storm	Moderate
Wildfire	Moderate

9.18.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.18-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.18-9 summarizes the NFIP statistics for the Village of Port Dickinson.

Table 9.18-9. Village of Port Dickinson NFIP Summary of Policy and Claim Statistics

# Policies	24
# Claims (Losses)	14
Total Loss Payments	\$363,306
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.18-10 provides a summary of the NFIP program in the Village of Port Dickinson.

Table 9.18-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Prone areas are Riverview Ave, lower Chenango St. below Terry Ave, Chenango St between Wayne Ave and 694
Do you maintain a list of properties that have been damaged by flooding?	Yes





NFIP Topic	Comments
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	None to Village's knowledge
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Substantial Damage Determinations are made consistent with FEMA's guidelines. The Village will develop village-specific guidelines.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	12/2020 Watson Ave Flooding
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit Review, Building Inspections, Damage Assessment, Record Keeping
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	If the improvement costs exceed 50% of the market value-either a single event or cumulative over time.
What are the barriers to running an effective NFIP program in the community, if any?	Resources for personnel and funding
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown
What is the local law number or municipal code of your flood damage prevention ordinance?	Local Law #2-1987 Section 65-23/ Zoning
What is the date that your flood damage prevention ordinance was last amended?	April 7, 1987
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Yes, it meets the minimum requirements.



NFIP Topic	Comments
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	All commercial development requires a plan and zoning review.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

9.18.5 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 9.18-11 through Table 9.18-13.

Table 9.18-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	7	0	1	8
Permits within SFHA	N/A	N/A	N/A	N/A
2020				
Total Permits	10	0	1	11
Permits within SFHA	N/A	N/A	N/A	N/A
2021				
Total Permits	12	0	2	14
Permits within SFHA	N/A	N/A	N/A	N/A
2022				
Total Permits	10	0	0	10
Permits within SFHA	N/A	N/A	N/A	N/A
2023				
Total Permits	7	0	1	8
Permits within SFHA	N/A	N/A	N/A	N/A

SFHA Special Flood Hazard Area (1% flood event)

Table 9.18-12. Recent Major Development and Infrastructure from 2018 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
Binghamton Pre Cast	Commercial	Retaining Wall	18 Phelps Street 128-60-3-4		95% complete





Binghamton Pre Cast	Commercial	Office Building	18 Phelps Street 128-60-3-4		Anticipated to begin Fall 2023
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* Only location-specific hazard zones or vulnerabilities are identified.

Table 9.18-13. 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
None Identified					

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

9.18.6 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 Village of Port Dickinson’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

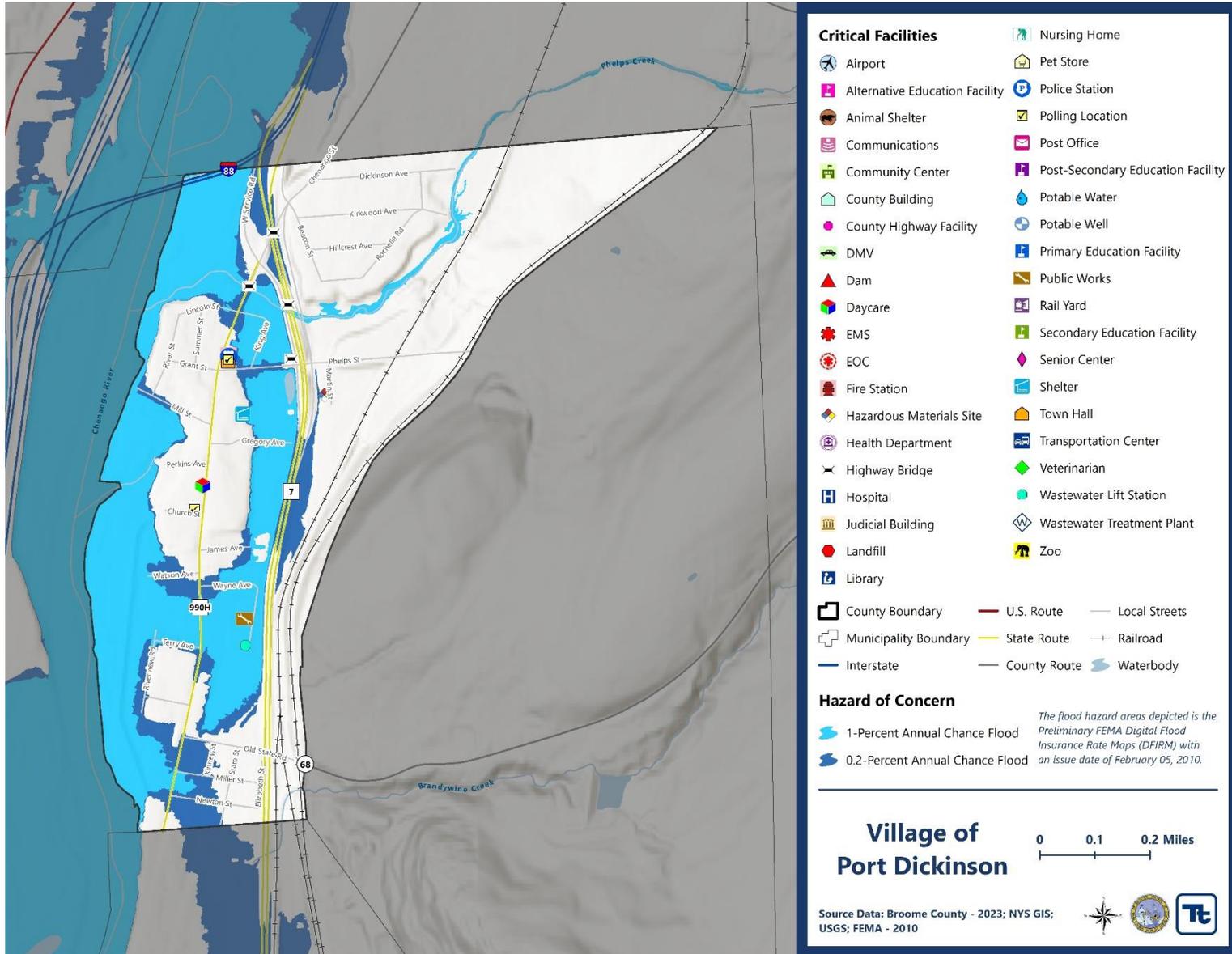
Hazard area maps provided below illustrate the probable hazard areas impacted within the Village are shown in Figure 9.18-1 through Figure 9.18-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Port Dickinson has significant exposure. The maps show the location of potential new development, where available.





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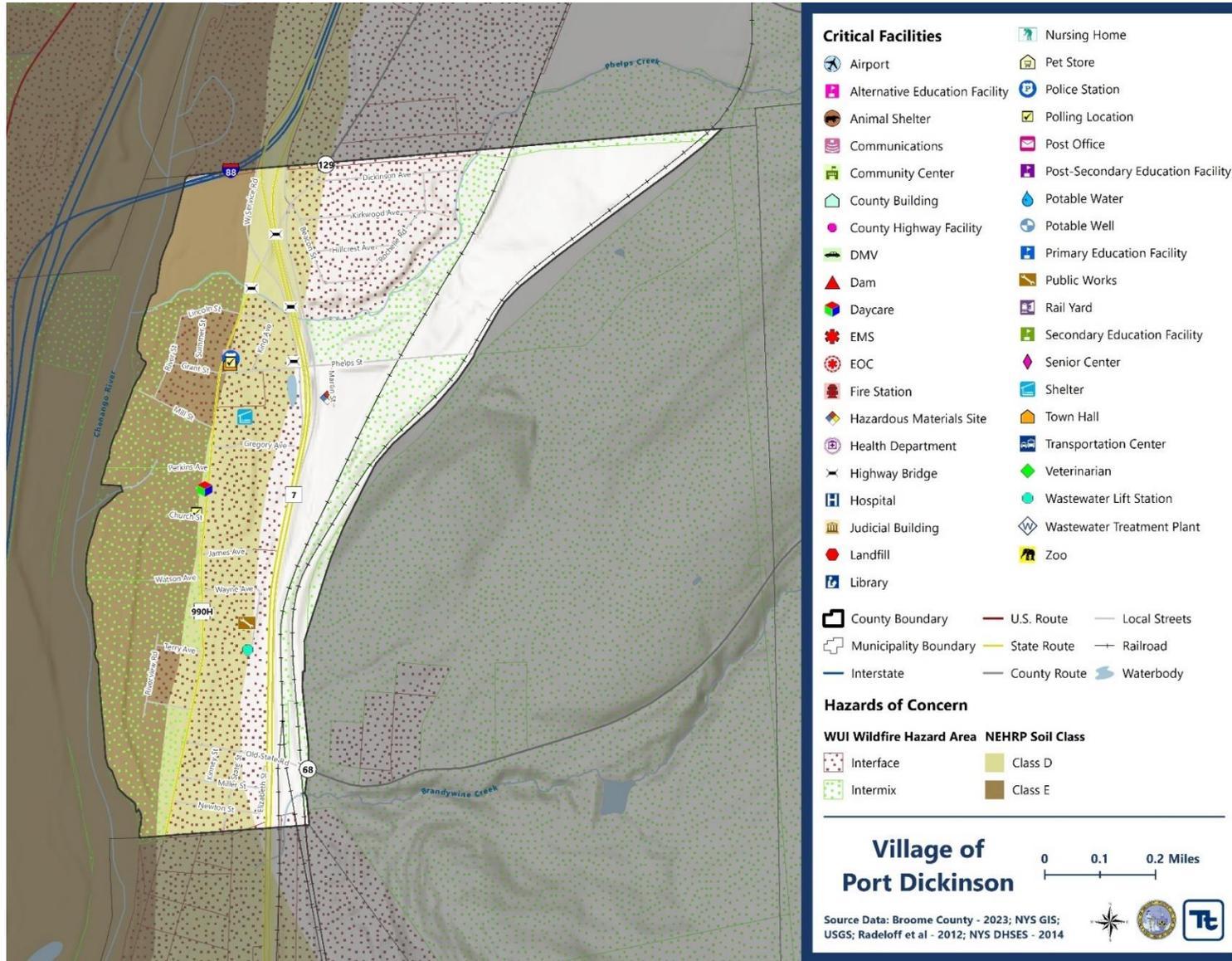
Figure 9.18-1. Village of Port Dickinson Flood Hazard Area Extent and Location Map





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Figure 9.18-2. Village of Port Dickinson NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Village of Port Dickinson is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.18-14 provides details on loss and damage in the Village during hazard events since the last hazard mitigation plan update.

Table 9.18-14. Hazard Event History in the Village of Port Dickinson

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	The Village did not have any damages or losses reported.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Village did not have any damages or losses reported.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Village did not have any damages or losses reported.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	The Village did not have any damages or losses reported.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Village of Port Dickinson.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Port Dickinson 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 Village indicated the following:

- The Village agreed with all of the preliminary rankings.

Table 9.18-15 shows Port Dickinson’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.18-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.18-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.18-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Wayne Ave Pump Station	Wastewater Lift Station	X	X	Action 2024-Port DickinsonV-01	-
Village of Port Dickinson DPW	Public Works	X	X	Action 2024-Port DickinsonV-01	-
Bridge_1003700	Highway Bridge	-	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1050210	Highway Bridge	-	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1073780	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6





In addition to critical facilities that are exposed to flooding, the following high-hazard dams are located in or could impact the Village of Port Dickinson:

- Brandywine Creek Site 1 Dam

Identified Issues

After a review of the Village of Port Dickinson’s hazard event history, hazard rankings, hazard location, and current capabilities, the Village of Port Dickinson identified the following vulnerabilities within their community:

- Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery. The following critical facilities are municipally owned and located in the special flood hazard area:
 - Wayne Ave Pump Stations
 - Village of Port Dickinson DPW
- Phelps Creek is eroding and flooding which is impacting nearby properties and infrastructure by the increasing water damage.
- The current pump station at Watson Avenue is undersized due to an increase in precipitation events and is at risk for flooding nearby properties and infrastructure because of its location in the floodplain.
- The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality needs a formal process and plans to provide a framework for conducting such inspections and determinations.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Village is currently not a member of the StormReady program.
- The Flood Damage Prevention Ordinance has not been updated since 1987 and needs an update and HMP integration.
- During heavy rainfall, water flows through a neighborhood and floods nearby homes and Chenango Street, which is a major thoroughfare. The Culverts need a clean-out to facilitate proper water flow. Trees need to be trimmed so that workers can access the culverts.
- The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.
- The Village has potential impacts from one high-hazard potential dam (Brandywine Creek Site 1 Dam). These structures have the potential to impact those living nearby.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*



9.18.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.18-17 indicates progress on the Village'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 9.18-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
V. Port Dickinson-1	Municipal Hall Flooding	Flood, Severe Storm	Mayor supported by the Board of Trustees, DPW, and Police/Fire Departments	The Village Hall of Port Dickinson is located at 786 Chenango Street. It houses all municipal departments, including the offices of emergency services and public works, and the police and fire departments. The building sits in Zone AE of the 100-year floodplain and is prone to flooding from the nearby Chenango River and Phelps Creek. Both water bodies are identified on maps on the next pages showing the location of the building and the proposed mitigation project. Should water enter the building during a flood, Village officials will not be able to effectively provide disaster response services (police and fire), and flooding will affect the continuity of operations for other municipal functions. Government operations	<ol style="list-style-type: none"> 1. No Progress 2. Received updated flood analysis 	<ol style="list-style-type: none"> 1. Discontinue 2. Due to updated flood analysis, the Village Hall located at 786 Chenango Street is no longer located in the 100- or 500-year floodplain, so this action is no longer needed.



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				would be interrupted and there could be a delay in disaster response on the part of first responders.		
V. Port Dickinson-2	Wayne Avenue Neighborhood Culvert Cleanout Project	Flood	Village DPW, with support from the Village Board	During heavy rainfall, the water flows through the neighborhood and floods nearby homes and Chenango Street, a major thoroughfare. The culverts must be cleaned out to facilitate water flow, and before this can be done limbs from overhanging trees must be trimmed for workers to be able to access the culverts.	<ol style="list-style-type: none"> No Progress Lack of funding 	<ol style="list-style-type: none"> Include During heavy rainfall, the water flows through the neighborhood and floods nearby homes and Chenango Street, a major thoroughfare. The culverts must be cleaned out to facilitate water flow, and before this can be done limbs from overhanging trees must be trimmed for workers to be able to access the culverts.
V. Port Dickinson-3	Protect the Wayne Avenue Pump Station to the 500-year flood level	Flood	Post Office, Village	The Pump Station is located in the 100-year floodplain	<ol style="list-style-type: none"> No Progress Lack of funding 	<ol style="list-style-type: none"> Include The Pump Station is located in the 100-year floodplain
V. Port Dickinson-4	Protect the Village of Port Dickinson DPW from the 500-year flood level	Flood	Post Office, Village	The DPW is located in the 100-year floodplain	<ol style="list-style-type: none"> No Progress Lack of funding 	<ol style="list-style-type: none"> Include The DPW is located in the 100-year floodplain
V. Port Dickinson-5	Update the NFIP Flood Damage	Flood	Floodplain Administrator	The current Flood Damage Prevention Ordinance (1987) does	<ol style="list-style-type: none"> No Progress Lack of staffing 	<ol style="list-style-type: none"> Include The current Flood Damage Prevention Ordinance (1987) does not include NYS freeboard requirements



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Prevention Ordinance			not include NYS freeboard requirements		



Proposed Hazard Mitigation Initiatives for the HMP Update

Port Dickinson participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Port Dickinson 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 the Village’s priorities.

Table 9.18-18 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. Table 9.18-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.18-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	-	-	X	-	X	X	-	-	X
Disease Outbreak	-	-	-	X	-	-	X	-	-	-
Drought	-	-	-	X	-	-	X	-	-	-
Earthquake	-	-	-	X	-	-	X	-	-	-
Extreme Temperature	-	-	-	X	-	-	X	-	-	-
Flood	X	X	-	X	X	X	X	X	X	X
Invasive and Nuisance Species	-	-	-	X	-	-	X	-	-	-
Severe Storm	X	X	-	X	X	X	X	X	X	X
Severe Winter Storm	X	X	-	X	X	X	X	X	X	X
Wildfire	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 stormwater 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 9.18-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-Port DickinsonV-01	Critical Facilities in the Floodplain	1	1	1	1	1	0	0	1	1	0	0	1	1	0	9	Medium
Action 2024-Port DickinsonV-02	Phelps Creek	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
Action 2024-Port DickinsonV-03	Watson Avenue Pump Station	1	1	1	1	1	1	0	1	1	0	1	1	1	0	11	High
Action 2024-Port DickinsonV-04	Substantial Damage Management Plan	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
Action 2024-Port DickinsonV-05	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Action 2024-Port DickinsonV-06	Update the NFIP Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	1	1	1	1	1	0	0	12	High
Action 2024-Port DickinsonV-07	Wayne Avenue Culvert Cleanout	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
Action 2024-Port DickinsonV-08	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
Action 2024-Port DickinsonV-09	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High

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



Action 2024-Port DickinsonV-01. Critical Facilities in the Floodplain

Action Name:	Action 2024-Port DickinsonV-01. Critical Facilities in the Floodplain	
Description of the Problem:	<p>Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery. The following critical facilities are municipally owned and located in the special flood hazard area:</p> <ul style="list-style-type: none"> • Wayne Ave Pump Stations • Village of Port Dickinson DPW 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>The Village will conduct a feasibility assessment to determine what additional floodproofing measures are needed at Wayne Avenue Pump Stations and the Village of Port Dickinson DPW to protect each to the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> • Elevation of facility • Floodproofing of facility • Mobile flood-barriers <p>Once the most cost-effective option is identified, the Village will carry out the option.</p>	
Lead Agency:	Public Works	
Supporting Agencies:	Floodplain Administrator, Broome County	
Estimated Cost:	TBD based on option	
Potential Funding Sources:	<i>FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Village Budget</i>	
Implementation Timeline:	Within 5 years	
Goals Met:	<i>Tetra Tech will address</i>	
Benefits:	Ensures continuity of operations at both critical facilities.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	





Impact on Critical Facilities/Lifelines:	This action will protect the Wayne Ave Pump Stations and the Municipal Hall which are critical facilities, maintaining the critical services that they provide.		
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.		
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.		
Priority: Check one	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Relocate facility.		Relocation is expensive and results in the loss or delay of critical services in the immediate area.
	Establish plans to enter into an MOU with neighboring critical facilities to provide service during flood events.		Reduction in response times and delay of critical services in the immediate area.



Action 2024-Port DickinsonV-02. Phelps Creek

Action Name:	Action 2024-Port DickinsonV-02. Phelps Creek		
Description of the Problem:	Phelps Creek is eroding and flooding which is impacting nearby properties and infrastructure by the increasing water damage.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Village will conduct a flood and erosion study on Phelps Creek to determine what can and needs to be done to reduce flooding and ensure the integrity of the Creek remains.		
Lead Agency:	Public Works		
Supporting Agencies:	Planning Board		
Estimated Cost:	TBD		
Potential Funding Sources:	HMGP, BRIC, FMA, County Budget, Municipal Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 5		
Benefits:	The Village will experience fewer issues regarding the flooding and structural integrity of the Creek.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be negatively impacted by the creek and may not have the financial ability to do anything about it.		
Impact on Critical Facilities/Lifelines:	Critical facilities that are located near the Creek may be negatively impacted.		
Impact of Capabilities:	This action will improve the capability of the Village to handle flooding.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of precipitation events, which may elevate the creek levels.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-





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	Elevate roadways	Costly and may not solve the problem.
	Buyout homes	Costly, negative social impacts.





Action 2024-Port DickinsonV-03. Watson Avenue Pump Station

Action Name:	Action 2024-Port DickinsonV-03. Watson Avenue Pump Station	
Description of the Problem:	The current pump station at Watson Avenue is undersized due to an increase in precipitation events and is at risk for flooding nearby properties and infrastructure because of its location in the floodplain.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village needs a design and reconstruction of a properly sized pump station for the flood levee near Watson Avenue to reduce flooding. The current pump station is located within the floodplain and needs to be upsized and upgraded to ensure continuity of operations.	
Lead Agency:	Public Works	
Supporting Agencies:	Planning Department, Construction Department	
Estimated Cost:	TBD	
Potential Funding Sources:	HMGP, BRIC, FMA, County Budget, Village Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 4, 5	
Benefits:	The Village will experience reduced flooding.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be located in the inundation areas.	
Impact on Critical Facilities/Lifelines:	The pump station is located within the floodplain and needs to be upsized and upgraded to ensure continuity of operations.	
Impact of Capabilities:	This action improves the flood capabilities of the Village.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is leading to an increase in the frequency and intensity of precipitation events, which may elevate the creek levels.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation





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	No Action	-
	Raise roadways in the area.	Flooding likely to impact property owners
	Elevate homes in the area.	Costly and roadways still flood





Action 2024-Port DickinsonV-04. Substantial Damage Management Plan

Action Name:	Action 2024-Port DickinsonV-04. Substantial Damage Management Plan	
Description of the Problem:	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"> • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for “market value” and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure’s pre-damage value. • Require permits for floodplain development. <p>The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plans to provide a framework for conducting such inspections and determinations.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	<p>The municipality will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Public Works	
Estimated Cost:	Staff Time	
Potential Funding Sources:	<i>Municipal Budget</i>	
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan.	
Goals Met:	1	



Benefits:	This plan will provide a process for making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliant with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.		
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.		
Impact of Capabilities:	This action improves disaster recovery capabilities.		
Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future developments in the municipality.		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides additional planning for disaster recovery.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on state or federal resources following disaster events.		Resources may not be available during major widespread events.
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations.		A plan outlining responsibility is still necessary to prevent missing important requirements.



Action 2024-Port DickinsonV-05. StormReady Program Participation

Action Name:	Action 2024-LisleV-07. StormReady Program Participation	
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Village is currently not a member of the StormReady program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will coordinate with the local NWS office to complete all necessary requirements to become a StormReady community.	
Lead Agency:	Village Administration	
Supporting Agencies:	Village Public Works, Broome County	
Estimated Cost:	Staff Time	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 2,3	
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.	





Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.		
Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and issue timely and effective warnings ahead of severe weather events. StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 		
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.		
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Increase warning system capabilities without StormReady guidance.		No CRS points would be available. Less public awareness and support from NWS.
	Hire a third party to conduct emergency warning system improvements.		Costly. No CRS points would be available. Less public awareness and support from NWS.



Action 2024-Port DickinsonV-06. Update the NFIP Flood Damage Prevention Ordinance

Action Name:	Action 2024-Port DickinsonV-06. Update the NFIP Flood Damage Prevention Ordinance		
Description of the Problem:	The Flood Damage Prevention Ordinance has not been updated since 1987 and needs an update and HMP integration.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Village will include updated flood information in its Flood Damage Prevention Ordinance and will integrate the current HMP information as needed.		
Lead Agency:	Floodplain Administrator		
Supporting Agencies:	Village Administration		
Estimated Cost:	Staff Time		
Potential Funding Sources:	<i>Village Budget</i>		
Implementation Timeline:	Within 5 years, after that ongoing		
Goals Met:	1, 2		
Benefits:	The Village will have a more up-to-date Flood Damage Prevention Ordinance.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be more heavily impacted by flood and an updated floodplain ordinance will more accurately capture the status of flood issues in the Village.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	This action improves the Village’s planning capabilities by having updated codes.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides an update to the floodplain ordinance which takes into account the changing climate.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





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Alternatives	Action	Evaluation
	No Action	-
	Rely on FEMA maps.	FEMA maps do not help dictate responsibilities and lay out best practices for flood.
	Rely on the County Floodplain Damage Prevention Ordinance.	The County ordinance is not specific to the Village.





Action 2024-Port DickinsonV-07. Wayne Avenue Culvert Cleanout

Action Name:	Action 2024-Port DickinsonV-07. Wayne Avenue Culvert Cleanout		
Description of the Problem:	During heavy rainfall, water flows through a neighborhood and floods nearby homes and Chenango Street, which is a major thoroughfare. The Culverts are in need of a clean-out to facilitate proper water flow. Trees need to be trimmed so that workers can access the culverts.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Village will conduct a clean-out of the Wayne Avenue culverts and will ensure that routine maintenance is set up to prevent additional issues.		
Lead Agency:	Public Works		
Supporting Agencies:	Village Administration		
Estimated Cost:	Staff Time		
Potential Funding Sources:	<i>Village Budget</i>		
Implementation Timeline:	Within 5 years, routine maintenance ongoing		
Goals Met:	1, 5		
Benefits:	This action will help reduce flooding along Chenango Street and within the nearby neighborhood.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be more heavily impacted by the flooding issues caused by the blocked culverts.		
Impact on Critical Facilities/Lifelines:	If the issue is not resolved, nearby critical facilities could experience flooding problems.		
Impact of Capabilities:	This action will improve flood reduction measures in the Village.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides for a reduction in flood along Chenango Street.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





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Alternatives	Action	Evaluation
	No Action	-
	Install new culverts.	Not a cost-effective solution.
	Install stormwater infrastructure.	The issue of culverts being filled with debris has not been solved.





Action 2024-Port DickinsonV-08. Socially Vulnerable Populations Outreach

Action Name:	Action 2024-Port DickinsonV-08. Socially Vulnerable Populations Outreach	
Description of the Problem:	The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Village will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website.	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Village Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Village. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Village will become educated on hazards and risks. The Village will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	



Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Village's already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Village.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.



Action 2024- Port DickinsonV -09. Dam Owner Partnership

Action Name:	Action 2024- Port DickinsonV -09. Dam Owner Partnership	
Description of the Problem:	The Village has potential impacts from one high-hazard potential dam (Brandywine Creek Site 1 Dam). These structures have the potential to impact those living nearby.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Work with the owners of the dams to ensure inspections and safety procedures are up to date. Identify mitigation actions to ensure the integrity of the dams and that it is protected up to the 0.2-percent flood hazard area.	
Lead Agency:	Village Administration	
Supporting Agencies:	Dam Owners, NYSDEC	
Estimated Cost:	Low	
Potential Funding Sources:	Village Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 4, 5	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
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 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.	
Impact of Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.	
Impact on Future Development:	Not applicable	
Climate Change Considerations:	Climate change may increase the frequency and severity of weather-related disaster events, which may contribute to the likelihood of a dam	





SECTION 9.18. Village of Port Dickinson

	failure event. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		The village will be unaware of any safety concerns for the dam or its condition.
	Utilize information from NYSDEC.		Owners may not be required to submit a safety plan to the State.
	Utilize information from the National Inventory of Dams.		Not all dams are listed on the inventory.





SECTION 9.

9.19 TOWN OF SANFORD

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

9.19.1 Hazard Mitigation Planning Team

The Town of Sanford identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.19-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.19-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Kenneth Wist, Town Supervisor Address: 91 Second Street, Deposit, NY 13754 Phone Number: 607-467-1910 Email: supervisor@townofsanfordny.com	Name/Title: Shane Lester, Town Board Councilperson Address: 91 Second Street, Deposit, NY 13754 Phone Number: 607-287-4246 Email: slester@deposit.stier.org
NFIP Floodplain Administrator	
Name/Title: Peter Hathaway, Code Enforcer Address: 91 Second Street, Deposit, NY 13754 Phone Number: 607-761-7536 Email: code@townofsanfordny.com	
Additional Contributors	
Name/Title: Kenneth Wist, Town Supervisor Method of Participation: Provided key input in the planning process	
Name/Title: Shane Lester, Town Board Councilperson Method of Participation: Provided key input in the planning process	
Name/Title: Peter Hathaway, Code Enforcer Method of Participation: Provided key input in the planning process	



Primary Point of Contact	Alternate Point of Contact
Name/Title: Paul VanSlyke, Representative Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Alison Lang, Town Clerk Method of Participation: Provided key input in the planning process	
Name/Title: John Russell, Zoning Board Chair Method of Participation: Provided key input in the planning process	
Name/Title: Kermit Mott, Planning Board Chair Method of Participation: Provided key input in the planning process	
Name/Title: Leo Shew, Highway Superintendent Method of Participation: Provided key input in the planning process	

9.19.2 Municipal Profile

The Town of Sanford is located on the eastern border of Broome County. The Town includes the hamlets of Danville, Gulf Summit, Howes, McClure, North Sanford, Sanford, and Vallonia Springs. The Village of Deposit is located within the Town of Sanford. For more information on the Village of Deposit, refer to Section 9.8. The Town of Sanford has a total area of 90.1 square miles. The Town of Sanford is located on the eastern border of Broome County. The Town is bordered on the east by Delaware County, to the north by Chenango County, to the south by the Pennsylvania State Line, and the west by the Towns of Colesville and Windsor. Artic Lake is found in the northeastern corner of the town while Oquaga Lake is found near the southeast part of town. The valley of Big Hollow is found in the northern portion of the town. Oquaga Creek flows through the Town and empties into the West Branch of the Delaware River near the Village of Deposit (Tetra Tech 2019).

Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Sanford is governed by a Supervisor and a Town Council made up of four Council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Sanford was 1,518, a 4.4 percent decrease from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 1.8 percent of the population is 5 years of age or younger, 30.9 percent is 65 years of age or older, 0 percent is non-English speaking, 6 percent is below the poverty threshold, and 16 percent is considered disabled.

9.19.3 Jurisdictional Capability Assessment and Integration

The Town of Sanford 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Sanford to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.19-2 summarizes the planning and regulatory tools that are available to the Town of Sanford. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.19-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	2004, Uniform Fire Prevention & Building Code	State and Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Town Code is enforced to ensure fire prevention and safety.				
Zoning/Land Use Code	Yes	1992	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Pursuant to the statutory powers vested in the Town of Sanford (hereinafter referred to as Town) to regulate and control land use, and to protect the health, safety, and welfare of its residents by taking into account floodways and natural hazard risks that the Town may experience.				
Subdivision Code	Yes	1993	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of the subdivision code is to <ul style="list-style-type: none"> • Promote orderly growth and development to preserve public health, safety, and general welfare. • Promote open space, conservation, protection, and proper use of land. • Coordinate a subdivision’s design with the community plan. 				
Site Plan Code	Yes	N/A	Local and County	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Code	Yes	N/A	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	2013	Federal, State, County, and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose of the Flood Damage Prevention Ordinance is to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	State-mandated BFE+2 for all construction, both residential and non-residential	State, Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> State-mandated BFE+2 for all construction, both residential and non-residential.				
Planning Documents				
General/Comprehensive Plan	Yes	Comprehensive Plan – Updating (1992)	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Plan discusses land use policies and plans for future growth.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	Yes	Floodplain Management Plan, 1987	Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Floodplain Management Plan addresses issues in the floodplain.				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<i>Consider the following:</i>				
<ul style="list-style-type: none"> • Does the transportation plan limit access to hazard areas? • Is transportation policy used to guide growth to safe locations? • Are transportation systems designed to function under disaster conditions (e.g. evacuation)? 				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Comprehensive Emergency Management plan addresses the communications, evacuation, and housing necessary for hazard events that the Town may experience.				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Continuity of Operations Plan	Yes	Emergency Operation Plan	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Emergency Operations Plan was developed for emergency events.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.19-3 summarizes the capabilities of the Town of Sanford to oversee and track development.

Table 9.19-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	The Code Enforcement Officer reviews permit applications.
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Permits are required and inspected
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	Yes	40%
Describe the level of build-out in your jurisdiction.	N/A	60%

Administrative and Technical Capability

Table 9.19-4 summarizes potential staff and personnel resources available to the Town of Sanford and their current responsibilities that contribute to hazard mitigation.





Table 9.19-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Planning Board
Zoning Board of Adjustment	Yes	A four-member board
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	A two-person department
Construction/Building/Code Enforcement Department	Yes	Code Enforcement issues permit
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Department
Mutual aid agreements	Yes	Town Board and Highway Department
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Supervisor/Planning Board/Town Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town Engineer/Code Officer
Planners or engineers with an understanding of natural hazards	Yes	Town Engineer
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments.	Yes	Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Town Supervisor
Grant writer(s)	No	Consider the following: Are data and maps from the HMP used to support documentation in grant applications?



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Resilience Officer	No	-
Other (NFIP Floodplain Administrator (FPA))	Yes	Code

Fiscal Capability

Table 9.19-5 summarizes financial resources available to the Town of Sanford.

Table 9.19-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds.	Yes
Incur debt through special tax bonds.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	

Education and Outreach Capability

Table 9.19-6 summarizes the education and outreach resources available to the Town of Sanford.

Table 9.19-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-



Community Classifications

Table 9.19-7 summarizes classifications for community programs available to the Town of Sanford.

Table 9.19-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.19-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.19-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate





9.19.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.19-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.19-9 summarizes the NFIP statistics for the Town of Sanford.

Table 9.19-9. Town of Sanford NFIP Summary of Policy and Claim Statistics

# Policies	21
# Claims (Losses)	17
Total Loss Payments	\$232,683
# Repetitive Loss Properties (NFIP definition)	2
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics current as of October 2023

Flood Vulnerability Summary

Table 9.19-10 provides a summary of the NFIP program in the Town of Sanford.

Table 9.19-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Mostly small streams, some areas by the Delaware River
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	Yes
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	People doing new construction are interested in mitigation.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No





NFIP Topic	Comments
How do you make Substantial Damage determinations?	Through inspection and contractor estimates
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None were declared
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	One Funded privately
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement Office
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	No
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit review, list of engineers for the Town
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	By cost versus property value
What are the barriers to running an effective NFIP program in the community, if any?	None
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	2020
What is the local law number or municipal code of your flood damage prevention ordinance?	Local Law 1 1987 Flood Damage Prevention
What is the date that your flood damage prevention ordinance was last amended?	2013
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meet
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, Planning and Zoning regulations
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No





9.19.5 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 9.19-11 through Table 9.19-13.

Table 9.19-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	3	0	2	5
Permits within SFHA	0	0	0	0
2020				
Total Permits	4	0	0	4
Permits within SFHA	0	0	0	0
2021				
Total Permits	3	0	0	3
Permits within SFHA	0	0	0	0
2022				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0
2023				
Total Permits	4	0	0	4
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.19-12. Recent Major Development and Infrastructure from 2018 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
Old Route 17 Truss Bridge Over Susquehanna River	Infrastructure	1	Old Route 17	NEHRP Soil Hazard Area	Completed
Old Route 17 Bridge Over Oquaga Creek	Infrastructure	1	Old Route 17	1% and 0.2% Flood Hazard Area, NEHRP Soil Hazard Area	Completed
Rehabilitation of Steel Arch Bridge	Infrastructure	1	Big Hollow Road	Wildfire Interface Hazard Area	Completed
North Sanford Road Bridge	Infrastructure	1	North Sanford Road	1% and 0.2% Flood Hazard Area, NEHRP Soil Hazard Area, Wildfire Interface Hazard Area	Completed

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





Table 9.19-13. 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
None Identified					

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

9.19.6 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 Town of Sanford’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

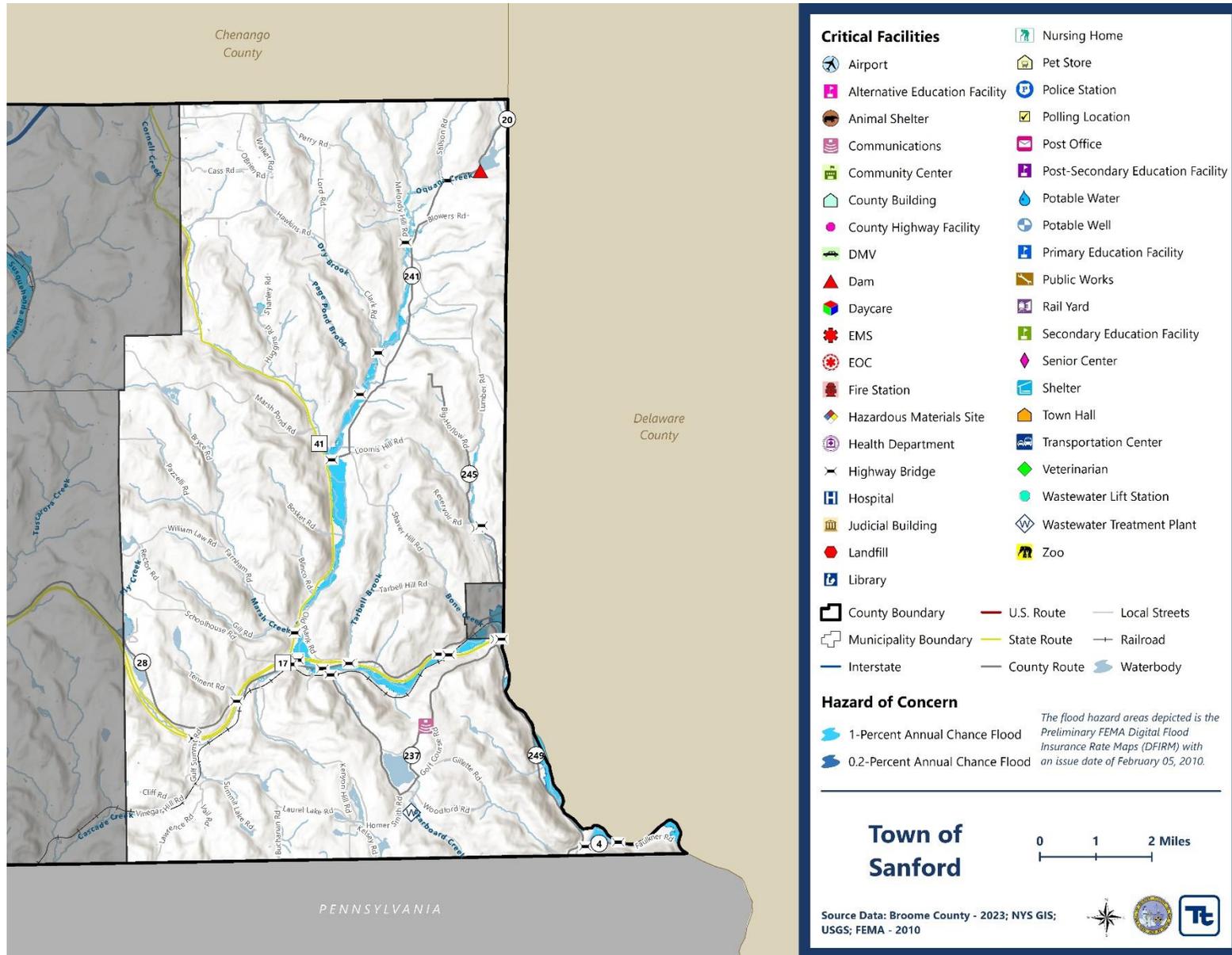
Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.19-1 through Figure 9.19-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Sanford has significant exposure. The maps show the location of potential new development, where available.





SECTION 9.19. Town of Sanford

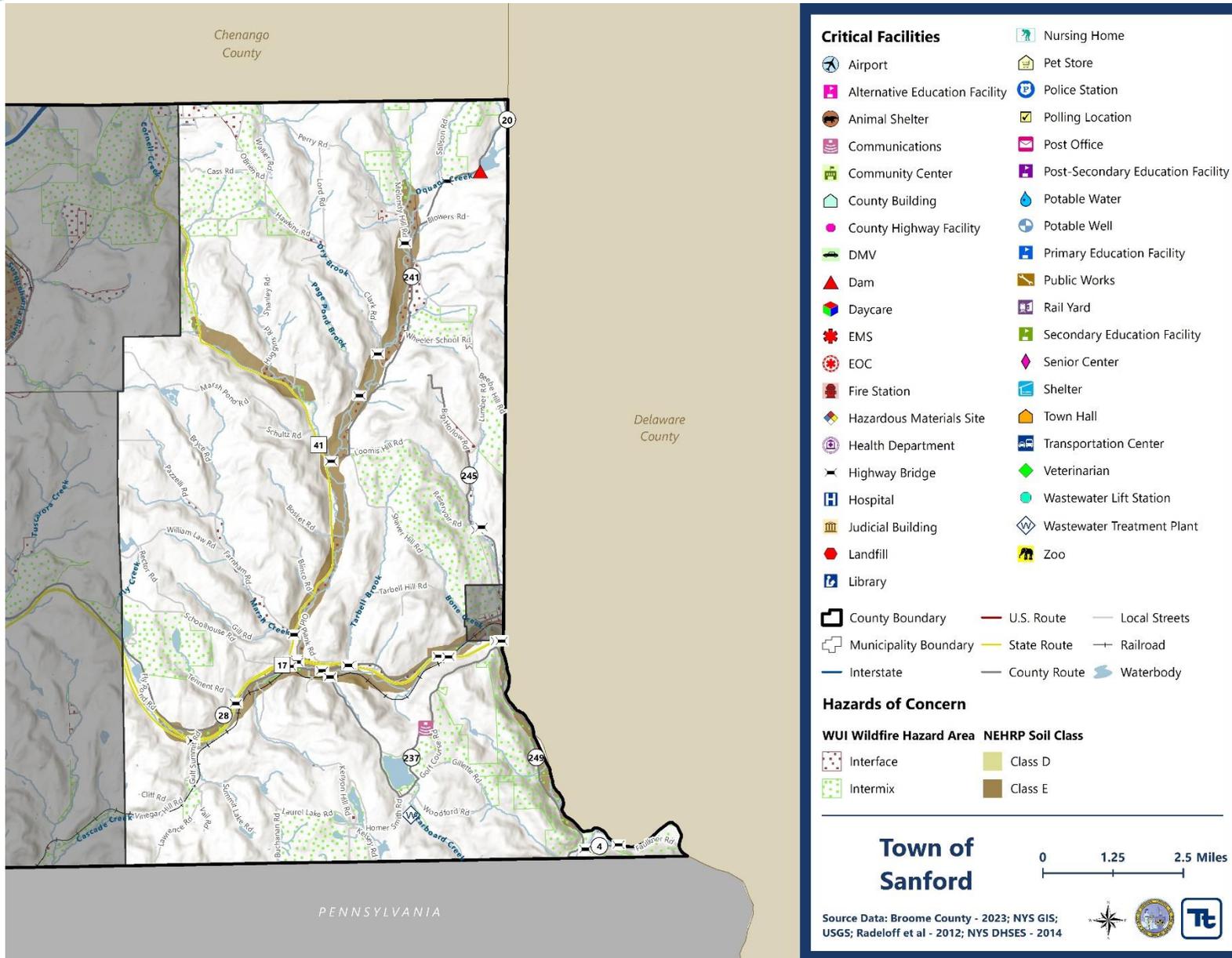
Figure 9.19-1. Town of Sanford Flood Hazard Area Extent and Location Map





SECTION 9.19. Town of Sanford

Figure 9.19-2. Town of Sanford NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Sanford is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.19-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.19-14. Hazard Event History in the Town of Sanford

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
Jan 2019	Flash Flood	No	Significant damage to a portion of Faulkener Road from a heavy rain event that caused flash flooding	Received grant from FEMA of \$1,261,246. The town was responsible for 12.5% of the project which was \$157,656.
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	No additional damages or losses were reported in the Town.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town incurred \$20k-\$30 of non-budgeted funds to cover extra hours logged by employees to follow COVID protocols. The majority of the overages occurred in the justice court. Also, extra hours were spent cleaning and disinfecting in all departments. As a direct result of the pandemic, inflation has caused a price increase in almost everything. This has significantly increased the town's operating costs.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Town had 28 roads that received some form of damage from this event. The town's highway department made all necessary repairs as no outside funding was available.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	A State of Emergency was declared by the township. Broome County Emergency Services set up a shelter at the Deposit Fire Station. We were provided tree crews and fuel by the County to help with the cleanup process eliminating a



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
May 1, 2023	Flash Flood	No	A localized heavy rain event caused a beaver dam failure north of Parker Road. A section of the road containing a large culvert pipe was washed out.	negative impact on our budget. The Town hired a subcontractor to make repairs. The total cost of repairs were approximately \$25,000

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Sanford.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Sanford 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 Town agreed with all of the preliminary rankings.

Table 9.19-15 shows Sanford’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.19-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.19-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.19-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_1013331	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1013332	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1094030	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_2225670	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_3349620	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_3349630	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_3352290	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

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

- Oquaga Creek State Park Dam

Identified Issues

After review of the Town of Sanford’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Sanford identified the following vulnerabilities within their community:

- The Town Highway facilities are currently located in the floodplain which leads to significant flooding during severe storm events. The project planning and property evaluation is currently underway and is funded by the municipality, however, the municipality cannot afford to fully relocate the facilities.
- The municipal building does not currently have backup power which prevents continuity of operations during outages and prevents the Town from using the facility as an emergency shelter and PPE distribution center.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has two repetitive loss properties, but other properties may be impacted by flooding as well.
- County Road 245 is susceptible to flooding within the Town limits which inhibits emergency responders and other critical facility/lifeline workers from performing continuity of operations if this road is unavailable to be used.





- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.
- The Town has potential impacts from two high-hazard potential dams (Oquaga Creek State Park Dam). These structures have the potential to impact those living nearby.
- The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*

9.19.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.19-17 indicates progress on the Town’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 9.19-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Sanford-1	Highway Garage Elevation/Relocation	Flood	Town Board	The Highway Department Garage is currently located within the floodplain. During heavy rainfall and flood events, this facility is vulnerable to being damaged by flood water.	<ol style="list-style-type: none"> In Progress Project planning and property evaluation is currently underway. Currently, the project is being funded through a municipal budget. 	<ol style="list-style-type: none"> Include The Town Highway facilities need to be relocated to a new property outside of the floodplain.
T. Sanford-2	Repetitive Loss Outreach	Flood	FPA	The Town of Sanford has 3 repetitive loss properties.	<ol style="list-style-type: none"> No Progress Limited funding 	<ol style="list-style-type: none"> Include The current NFIP numbers report two repetitive loss properties



Proposed Hazard Mitigation Initiatives for the HMP Update

Sanford participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Sanford 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 the Town’s priorities.

Table 9.19-18 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. Table 9.19-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.19-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	-	-	X	X	X	X	-	X	-
Disease Outbreak	-	-	-	X	-	-	X	-	-	X
Drought	-	-	-	X	-	-	X	-	-	-
Earthquake	-	-	-	X	-	-	X	-	-	-
Extreme Temperature	-	-	-	X	-	-	X	-	-	-
Flood	X	X	-	X	X	X	X	-	X	X
Invasive and Nuisance Species	-	-	-	X	-	-	X	-	-	-
Severe Storm	X	X	-	X	-	X	X	-	X	X
Severe Winter Storm	X	X	-	X	-	X	X	-	X	X
Wildfire	-	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 stormwater 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 9.19-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-SanfordT-01	Highway Garage	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
Action 2024-SanfordT-02	Backup Generator	1	0	1	1	1	1	1	0	1	1	1	1	1	1	12	High
Action 2024-SanfordT-03	Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
Action 2024-SanfordT-04	County Road 245	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
Action 2024-SanfordT-05	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Action 2024-SanfordT-06	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
Action 2024-SanfordT-07	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High

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



Action 2024-SanfordT-01. Highway Garage Action

Action Name:	Highway Garage Action	
Description of the Problem:	The Town Highway facilities are currently located in the floodplain which leads to significant flooding during severe storm events. The project planning and property evaluation is currently underway.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Infestation and Invasive Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will continue to evaluate potential property spots for the new Town Highway facilities so that they can fully relocate the highway facilities out of the floodplain to ensure continuity of operations can commence during severe storm events. After a property is selected, the Town will obtain building estimates and will select the best and most cost-effective estimate.	
Lead Agency:	Town Board	
Supporting Agencies:	Town Highway Department	
Estimated Cost:	TBD after project planning is complete	
Potential Funding Sources:	HMGP, BRIC, FMA	
Implementation Timeline:	Within 5 years	
Goals Met:	1,4	
Benefits:	The Highway Department will be able to perform continuity of operations.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.	
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	
Impact of Capabilities:	This action strengthens the Town’s ability to perform continuity of operations during flood events.	
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.	





Climate Change Considerations:	Climate change is leading to an increase in the severity and frequency of severe storms and severe winter storms. This will increase the probability of flooding in the original location.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No Action.	-	
	Floodproof existing structures.	May not necessarily reduce the risk.	
	Construct floodwalls to stop flood issues.	Will most likely interrupt natural floodplain function.	





Action 2024-SanfordT-02. Backup Generator

Action Name:	Backup Generator Action	
Description of the Problem:	The municipal building does not currently have backup power which prevents continuity of operations during outages and prevents the Town from using the facility as an emergency shelter and PPE distribution center.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Infestation and Invasive Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will conduct an engineering study to determine the correct sized generator needed to power the entire municipal building. Once this is determined, the Town will acquire funding for the purchase and installation of the generator. The Town will also conduct routine maintenance to enhance the lifespan of the generator.	
Lead Agency:	Town Board	
Supporting Agencies:	Supervisor	
Estimated Cost:	\$100,000	
Potential Funding Sources:	HMGP, Climate Smart Communities Grant Program	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 4	
Benefits:	The Town will be able to perform continuity of operations at the municipal building and will provide emergency shelter and have a PPE distribution center.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will have access to an emergency shelter and will have a known location to obtain PPE materials as needed.	
Impact on Critical Facilities/Lifelines:	This action promotes the continuity of operations at the municipal building which the Town considers to be a critical facility.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is leading to an increase in the severity and frequency of severe storms and severe winter storms. This will increase the probability of flooding in the original location.	





Priority: <i>Check one</i> Alternatives	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
	Action		Evaluation
	No action.		The current problem remains.
	Microgrid.		Costly and difficult to implement.
	Solar panels and battery backup.		Solar power is unlikely to be able to provide battery power for extended power failure events.





Action 2024-SanfordT-03. Repetitive Loss Properties

Action Name:	Repetitive Loss Properties	
Description of the Problem:	Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has two repetitive loss properties, but other properties may be impacted by flooding as well.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Infestation and Invasive Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	Conduct outreach to 10 flood-prone property owners, including RL/SRL property owners, 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).	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Public Works; Broome County	
Estimated Cost:	Staff Time	
Potential Funding Sources:	HMGP, BRIC, FMA, Broome County, Annual Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 5	
Benefits:	Eliminates flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
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 Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.	
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.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	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 2024-SanfordT-04. County Road 245

Action Name:	County Road 245	
Description of the Problem:	County Road 245 is susceptible to flooding within the Town limits which inhibits emergency responders and other critical facility/lifeline workers from performing continuity of operations if this road is unavailable to be used.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will perform a flood study to determine the flood problem areas within the Town limits and will identify solutions and implement the most cost-effective solution.	
Lead Agency:	Public Works	
Supporting Agencies:	Planning Board	
Estimated Cost:	TBD after Study	
Potential Funding Sources:	<i>HMPG, BRIC, FMA, County Budget, Municipal Budget</i>	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 5	
Benefits:	The road will have reduced flooding and will also prevent the negative impact on those dependent on the road for travel.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Some socially vulnerable populations may be reliant on County Road 245 for access to critical facilities/lifelines.	
Impact on Critical Facilities/Lifelines:	Critical facilities along County Road 245 are negatively impacted by the flooding issues.	
Impact of Capabilities:	This action will increase the Town’s capability to handle flood-related issues.	
Impact on Future Development:	Future development along County Road 245 will not be impacted by flood issues if the flood issues are resolved.	
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Elevate the road.		Unsure if this is the most cost-effective solution because the root issue has not been identified.
	Install additional storm grates.		Unsure if this is the most cost-effective solution because the root issue has not been identified.





Action 2024-SanfordT-05. StormReady Program Participation

Action Name:	StormReady Program Participation	
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will coordinate with the local NWS office to complete all necessary requirements to become a StormReady community.	
Lead Agency:	Public Works	
Supporting Agencies:	Broome County, FEMA	
Estimated Cost:	Staff Time	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 2,3	
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.	
Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.	





Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and issue timely and effective warnings ahead of severe weather events. StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 		
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.		
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Increase warning system capabilities without StormReady guidance.		No CRS points would be available. Less public awareness and support from NWS.
	Hire a third party to conduct emergency warning system improvements.		Costly. No CRS points would be available. Less public awareness and support from NWS.



Action 2024- SanfordT-06. Dam Owner Partnership

Action Name:	Action 2024- SanfordT-06. Dam Owner Partnership	
Description of the Problem:	The Town has potential impacts from two high-hazard potential dams (Oquaga Creek State Park Dam). These structures have the potential to impact those living nearby.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Work with the owners of the dams to ensure inspections and safety procedures are up to date. Identify mitigation actions to ensure the integrity of the dams and that it is protected up to the 0.2-percent flood hazard area.	
Lead Agency:	Town Administration	
Supporting Agencies:	Dam Owner	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 4, 5	
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.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
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 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.	
Impact of Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.	
Impact on Future Development:	Not applicable	
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. This action will increase the capabilities to respond to these events.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		The town will be unaware of any safety concerns for the dam or its condition.
	Utilize information from NYSDEC.		Owners may not be required to submit a safety plan to the State.
	Utilize information from the National Inventory of Dams.		Not all dams are listed on the inventory.





Action 2024- SanfordT -07. Socially Vulnerable Populations Outreach

Action Name:	Action 2024- SanfordT -07. Socially Vulnerable Populations Outreach	
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.	
Lead Agency:	Town Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	
Impact on Critical Facilities/Lifelines:	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.	





Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.





SECTION 9.

9.20 TOWN OF TRIANGLE

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Town of Triangle with reducing losses from future hazard events. This annex is not guidance on 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 Town of Triangle, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.20.1 Hazard Mitigation Planning Team

The Town of Triangle identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.20-1 Volume 1 summarizes Town officials who participated in the development of the annex and in what capacity. It also includes additional documentation of the Town’s planning activities through Planning Partnership meetings.

Table 9.20-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Charles Manasse, Town Supervisor Address: 2612 Liberty Street, P O Box 289, Whitney Point, New York 13862 Phone Number: 607-692-4332, Ext. 1 Email: supervisor@townoftriangle.org	Name/Title: Mark Mesceda, Building Department Address: 2612 Liberty Street, P O Box 289, Whitney Point, New York 13862 Phone Number: 607-692-4332, Ext. 0 Email:-
NFIP Floodplain Administrator	
Name/Title: Charles Manasse, Town Supervisor Address: 2612 Liberty Street, P O Box 289, Whitney Point, New York 13862 Phone Number: 607-692-4332, Ext. 1 Email: supervisor@townoftriangle.org	
Additional Contributors	
Name/Title: Charles Manasse, Town Supervisor Method of Participation: Planning Partnership KO Meeting	





9.20.2 Municipal Profile

The Town of Triangle is located in the northeastern part of Broome County, NY. The Town includes the hamlets of Cloughs Corners, Triangle, and Upper Lisle. The Village of Whitney Point is located within the Town of Triangle. For more information on the Village of Whitney Point, refer to Section 9.23. The Town of Triangle has a total area of 39.8 square miles. The Town of Triangle is located in the northeastern part of Broome County, NY. The town is bordered on the east by Chenango County and to the north by Cortland County. The Tioughnioga River flows through the southwestern portion of the town. The Town of Triangle has the unique designation of having a large body of water (Dorchester Lake) that is regulated by the US Army Corps of Engineers, and Broome County. Thus, the Town has very little to say in the management of the land surrounding the lake. Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Triangle is governed by a Supervisor and a Town Council made up of four Council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Triangle was 1,849, a 6.7 percent decrease from the 2010 Census.

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 several 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 2022 U.S. Census American Community Survey indicates that 2.2 percent of the population is 5 years of age or younger, 16.2 percent is 65 years of age or older, 0 percent is non-English speaking, 13.6 percent is below the poverty threshold, and 16.1 percent is considered disabled.

9.20.3 Jurisdictional Capability Assessment and Integration

The Town of Triangle 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 /or policy



documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Triangle to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.20-2 summarizes the planning and regulatory tools that are available to the Town of Triangle. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.20-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Building Code of New York State (2020)	State and Local	New York State
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The NYS Building Code is intended to establish provisions that adequately protect public health, safety, and welfare through the minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The 2020 edition is an update to the 2018 edition published by the ICC. It is part of the Uniform Fire Prevention and Building Code.				
Zoning/Land Use Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Subdivision Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Site Plan Code	Yes	Prior to Permit issuance site plan is reviewed	Local and County	Building Inspector
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Site Plan Ordinance requires measures and reviews to prevent buildings that would impair flood hazard areas.				
Stormwater Management Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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.				
Growth Management	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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Flood Damage Prevention (Local Law 1 of 1996)	Federal, State, County, and Local	Town Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas. The law establishes the Code Enforcement Officer as the 'Local Administrator' authorized to grant or deny floodplain development permits and states that floodplain maps are on file at the office of the Town Clerk.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	NYS Residential Code (2010); R324.1.3.3 Freeboard	State, Local	Town Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified. A freeboard shall not be required where it is not possible to obtain a design flood elevation from the FIRM or any method established above and the design flood elevation is three feet above the highest adjacent grade.				
Planning Documents				
General/Comprehensive Plan	Yes	Town of Triangle Comprehensive Plan (2004)	Local	Planning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This plan is the first in the history of the Town of Triangle. The comprehensive plan gives validity to local land use decisions. In a town with a comprehensive plan, other governmental agencies must consider the impact of capital projects on the adopted plan. By preparing a comprehensive plan, a community lays out its shared vision and builds consensus for projects and policies. A comprehensive plan can be used to protect resources and guide development.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	County Comprehensive Emergency Management Plan; NYS 2019 State Hazard Mitigation Plan (SHMP)	Local or County	Broome County
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
NYS (2019) - This portion of the CEMP addresses the State's overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA's five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operation Plan, February 14, 2008	County	Broome County OEM
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	Local and state	NYSDHS
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following: <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and provide an overview of the stakeholder planning group (SPG).				
Other: Hazardous Material Response Plan	Yes	Hazards Material Response Plan	County	Broome County
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Hazardous Material Response Plan is responsible for reducing hazardous material impacts and risks to the Town.				

Development and Permitting Capability

Table 9.20-3 summarizes the capabilities of the Town of Triangle to oversee and track development.





Table 9.20-3. Development and Permitting Capability

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

Administrative and Technical Capability

Table 9.20-4 summarizes potential staff and personnel resources available to the Town of Triangle and their current responsibilities that contribute to hazard mitigation.

Table 9.20-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	No	-
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	No	-
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department is responsible for the maintenance and upkeep of roads and streets within the Town.
Mutual aid agreements	Yes	Broome County and the Town have mutual aid agreements.
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	No	-
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	No	-
Staff with expertise or training in benefit/cost analysis	Yes	The supervisor is responsible for the financial management of the Town.
Professionals trained in conducting damage assessments.	Yes	Supervisor/Highway Superintendent is responsible for damage assessments within the Town.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	
Grant writer(s)	No	<i>Consider the following:</i> Are data and maps from the HMP used to support documentation in grant applications?
Resilience Officer	No	
Other (NFIP Floodplain Administrator (FPA))	Yes	The Highway Superintendent is the NFIP FPA for the Town.

Fiscal Capability

Table 9.20-5 below summarizes financial resources available to the Town of Triangle.

Table 9.20-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	No
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas, or electric service	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.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	





Education and Outreach Capability

Table 9.20-6 summarizes the education and outreach resources available to the Town of Triangle.

Table 9.20-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Red Cross, Facebook.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Broome County Emergency Services' role is to provide planning, training, resources, response, warning, coordination, and information through communications to the public, elected officials, and public safety agencies to assist them in preparing for, responding to, and mitigating emergencies and disasters which affect the residents of Broome County.
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.20-7 summarizes classifications for community programs available to the Town of Triangle.

Table 9.20-7. 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	State and County	Unknown
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.20-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.20-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

9.20.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.20-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.20-9 summarizes the NFIP statistics for the Town of Triangle.

Table 9.20-9. Town of Triangle NFIP Summary of Policy and Claim Statistics

# Policies	0
# Claims (Losses)	1
Total Loss Payments	\$0
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.20-10 provides a summary of the NFIP program in the Town of Triangle.

Table 9.20-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	The low-lying areas within the Town experience repeated exposure to flooding.
Do you maintain a list of properties that have been damaged by flooding?	No, the Town does not maintain a list of properties that have been damaged by flooding.
Do you maintain a list of property owners interested in flood mitigation?	Unknown at this time.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown at this time.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No, there are no current projects underway.
How do you make Substantial Damage determinations? •	Unknown at this time.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Unknown at this time.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	Unknown at this time.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Unknown at this time.
NFIP Compliance	
What local department is responsible for floodplain management?	USACE is responsible for floodplain management within the Town.
Are any certified floodplain managers on staff in your jurisdiction?	No, there are no certified floodplain managers within the Town.
Do you have access to resources to determine possible future flooding conditions from climate change?	Unknown at this time.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Unknown at this time.
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	Unknown at this time.
What are the barriers to running an effective NFIP program in the community, if any?	Unknown at this time.





NFIP Topic	Comments
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No, there are no outstanding NFIP compliance violations within the Town.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown at this time.
What is the local law number or municipal code of your flood damage prevention ordinance?	Flood Damage Prevention (Local Law 1 of 1996)
What is the date that your flood damage prevention ordinance was last amended?	1996
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Unknown at this time.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Unknown at this time.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Town is unsure at this time.

9.20.5 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 9.20-11 through Table 9.20-13

Table 9.20-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)





Table 9.20-12. Recent Major Development and Infrastructure from 2018 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
2854, 2862 RT II	Commercial	Byrne Dairy	-	-	-

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

Table 9.20-13. 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
None Anticipated.					

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

9.20.6 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 Town of Triangle’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.20-1 through Figure 9.20-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Triangle has significant exposure. The maps show the location of potential new development, where available.



Figure 9.20-1. Town of Triangle Flood Hazard Area Extent and Location Map

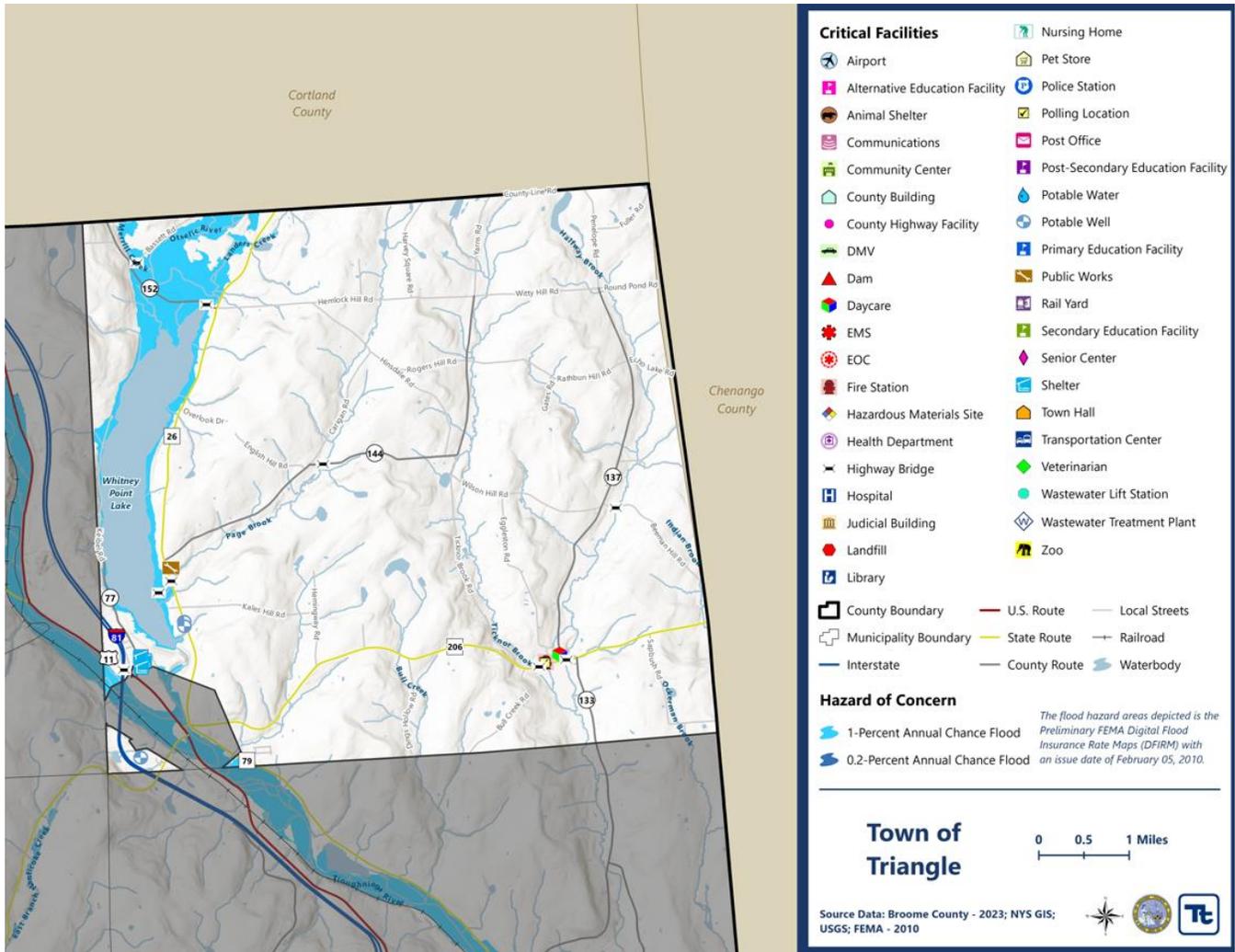
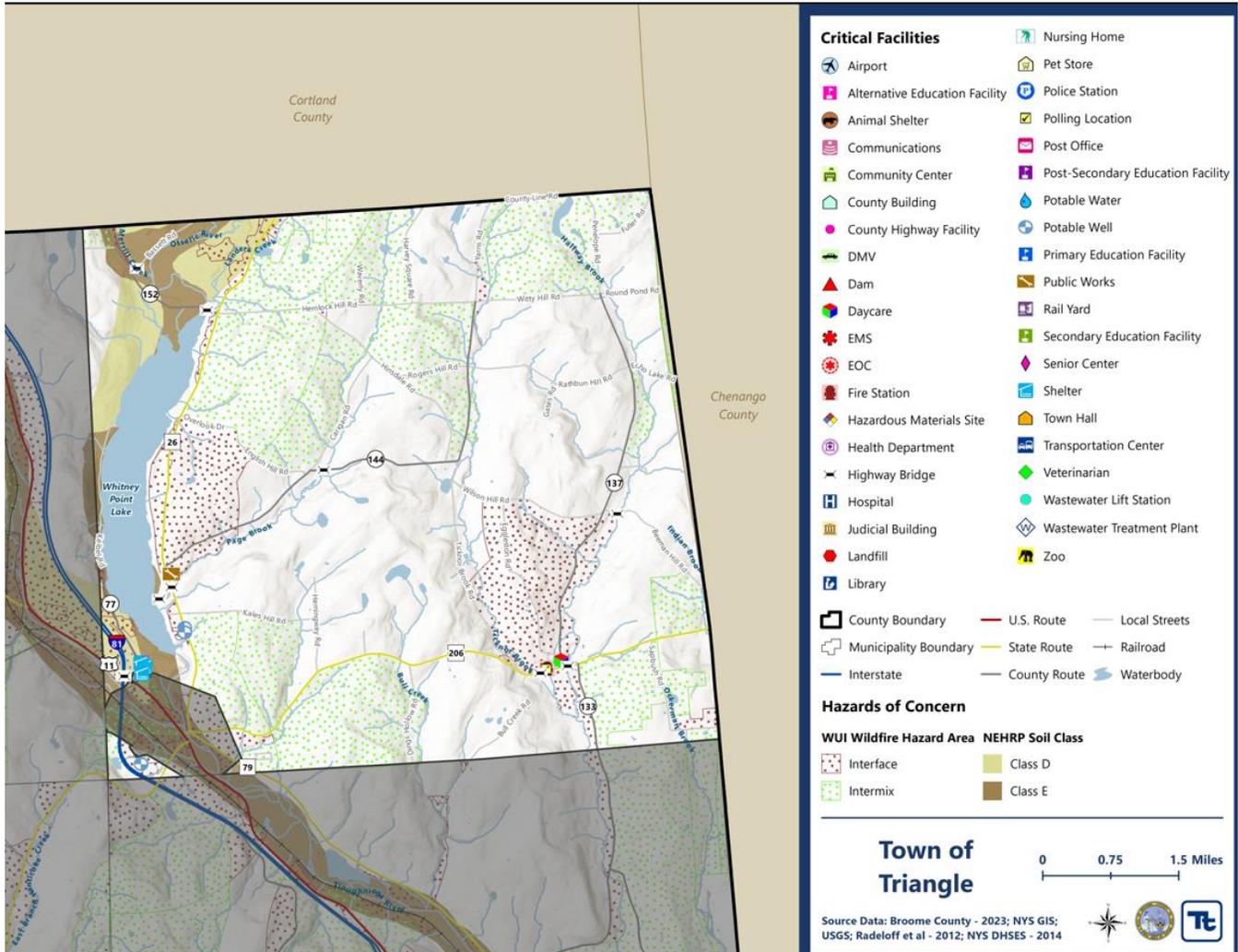




Figure 9.20-2. Town of Triangle NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Triangle is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.20-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.20-14. Hazard Event History in the Town of Triangle

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	While the County was impacted, the Town did not report significant damages from this event.
January 20, 2020-May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town was subject to closures and social distancing/masking requirements.
December 24-25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event causes \$445,000 in property damages.	While the County was impacted, the Town did not report significant damages from this event.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6-15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	While the County was impacted, the Town did not report significant damages from this event.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Triangle.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Triangle 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 Town indicated the following:

- The Town agrees with the hazard ranking in Table 9.20-15, as identified in the Hazard Ranking Meeting.

Table 9.20-15 shows Triangle’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.20-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

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 9.20-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.20-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_3349680	Highway Bridge	Yes	Yes	2024-TriangleT-06	-
Bridge_3349700	Highway Bridge	Yes	Yes	2024-TriangleT-06	-
Bridge_3349720	Highway Bridge	Yes	Yes	2024-TriangleT-06	-

Source: Broome County, 2023





Identified Issues

After review of the Town of Triangle’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Triangle identified the following vulnerabilities within their community:

- Undersized sluices– not long and wide enough for the roads. This chokes the road down and does not have proper headwalls. They are old and need to be replaced.
- Harvey Square Road – huge wetland that DEC built; issues with beavers building dams which leads to flooding in this area.
- Gayhead Road (East Hill Rd) – a seasonal road that is in need of substantial work. A very steep road with a major rock outcropping.
- The Town Hall is a critical facility in the town and needs to operate during hazard events and power outages. It currently does not have backup power and cannot fully operate during power outages.
- The Town Highway Department facility is a critical facility in the town and needs to operate during hazard events and power outages. It currently does not have backup power and cannot fully operate during power outages.
- The following Highway Bridges are critical assets for the Town and are located in the 1% and 0.2% flood levels:
 - Bridge 3349680
 - Bridge 3349700
 - Bridge 3349720

9.20.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.20-17 indicates progress on the Town’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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.20-17, the Town of Triangle identified the following mitigation efforts completed since the last HMP:

- Breakup power: on order, stand-by generator for Town offices and highway garage.
- New salt storage



- Stormwater management maintenance on roads Hemingway, Echo Lake, Wilson Hill, Rathbon Hill, and Travis.

Since the adoption of the County's first HMP, the Town of Triangle has made significant mitigation progress in the following areas:

- Stormwater Management
- Mitigation Funding Opportunities
- Tools and Resources
- Studies and Designs



Table 9.20-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Triangle Town-1	Update sluices in the Town	Flood, Severe Storm	Highway Dept.	Undersized – not long and wide enough for the roads. This chokes the road down and does not have proper headwalls. They are old and need to be replaced. Install larger sluice pipes along the following roadways: Hemmingway Road; Echo Lake Road; Wilson Hill Road; Rathbon Hill Road; and Travis Road. They will be installed under the roadway.	<ol style="list-style-type: none"> In Progress. Challenges with staffing. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The sluices in the Town are old and need to be replaced. The Town will install larger sluice pipes along the following roadways: Hemmingway Road; Echo Lake Road; Wilson Hill Road; Rathbon Hill Road; and Travis Road. They will be installed under the roadway. N/A
Triangle Town-2	Overflow pipes installed in the town	Flood, Severe Storm	Highway Dept.	In the event of downed trees or roadway debris, the areas of Hemmingway Road; Echo Lake Road; Wilson Hill Road; Rathbon Hill Road; and Travis Road tend to become inundated because water from heavy rain events does not have anywhere to go. This creates a problem for emergency personnel from accessing these areas in the town. Solution: Install overflow pipes in the areas of Hemmingway Road; Echo Lake Road; Wilson Hill Road; Rathbon Hill Road; and Travis Road to reduce flooding in the event of downed trees or debris in the roadways. This will reduce or eliminate the chances of closed roadways, and inundated roadways,	<ol style="list-style-type: none"> Ongoing Capability. No challenges to date. 	<ol style="list-style-type: none"> Discontinue. N/A Ongoing capability/maintenance procedure.



				and allow emergency personnel access to these areas of the town.		
Triangle Town-3	Harvey Square Road and Beavers	Flood	Highway Dept.	Harvey Square. Road – a huge wetland that DEC built; issues with beavers building dams which leads to flooding in this area. Conduct a study of the areas impacted by beaver activity and identify solutions to alleviate the flooding issues associated with the beavers. Once the study identifies the best solutions, the town will incorporate those solutions.	<ol style="list-style-type: none"> In progress. Road raised and guide rail to be installed. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. Based on a previous study of the areas impacted by beaver activity the Town identified solutions to alleviate the flooding issues associated with the beavers. The Town has raised the roadway and will install a guide rail.
Triangle Town-4	Gayhead Road Improvements	Flood, Severe Storm	Highway Dept.	Gayhead Road (East Hill Rd) – a seasonal road that is in need of substantial work. A very steep road with a major rock outcropping. A study needs to be conducted to determine the types of projects needed to improve the road. One project would be widening the roadway and installing drainage improvements.	<ol style="list-style-type: none"> No progress. Challenges with staff availability and funding. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. Gayhead Road is a very steep road with a major rock outcropping. A study needs to be conducted to determine the types of projects needed to improve the road. One project would be widening the roadway and installing drainage improvements. N/A
Triangle Town-5	Town Hall Backup Generator	All	Town Board	Town Hall includes the Town of Triangle, Village of Whitney Point, and NYS Trooper offices, as well as the Broome County mobile DMV office. When there are power outages, the offices cannot function properly or provide services to meet the needs of residents. Purchase and install a propane-powered generator that will fully power the facility during power outages. This will allow for continuity of operations and allow all operations in the building to function during a power outage.	<ol style="list-style-type: none"> In progress. Challenges with staff capabilities. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. Town Hall includes the Town of Triangle, Village of Whitney Point, and NYS Trooper offices, as well as the Broome County mobile DMV office. When there are power outages, the offices cannot function properly or provide services to meet the needs of residents. Purchase and install a propane-powered generator that will fully power the facility during power outages. This will allow for continuity of operations and allow all operations in the building to function during a power outage. N/A
Triangle Town-6	Highway Department Backup Generator	All	Town Board and Highway Department	The Town Highway Department facility is a critical facility in the town and needs to operate during hazard events and power outages. It currently does not have backup power and cannot fully operate during power outages.	<ol style="list-style-type: none"> In Progress Bided out to be completed within a year. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The Town will purchase and install a propane-powered generator that will fully power the Highway Department facility during power outages. This will allow for continuity of operations and allow highway services to operate properly during a power outage.



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				Purchase and install a propane-powered generator that will fully power the facility during power outages. This will allow for continuity of operations and allow highway services to operate properly during a power outage.		3. N/A
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Proposed Hazard Mitigation Initiatives for the HMP Update

Triangle participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Triangle 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 the Town’s priorities.

Table 9.20-18 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. **Error! Reference source not found.** provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.20-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure		X								X
Disease Outbreak		X								X
Drought		X								X
Earthquake		X								X
Extreme Temperature		X								X
Flood	X	X			X	X				X
Invasive and Nuisance Species		X								X
Severe Storm	X	X			X	X				X
Severe Winter Storm		X								X
Wildfire		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 stormwater 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 9.20-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-TriangleT-01	Update Sluices in the Town	1	1	1	1	0	0	0	0	0	0	1	1	1	1	8	Medium
2024-TriangleT-02	Harvey Square Road and Beavers	1	1	1	1	0	0	0	1	0	1	1	1	1	1	10	Medium
2024-TriangleT-03	Gayhead Road Improvements	1	1	1	1	0	0	0	0	1	1	1	1	1	1	10	Medium
2024-TriangleT-04	Town Hall Backup Generator	1	1	1	1	0	1	0	0	1	1	1	1	1	1	11	High
2024-TriangleT-05	Highway Department Backup Generator	1	1	1	1	0	1	0	0	1	1	1	1	1	1	11	High
2024-TriangleT-05	Critical Facilities in the Floodplain	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High

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



Action 2024-TriangleT-01. Update Sluices in the Town

Action Name:	2024-TriangleT-01(prev. Triangle Town-1)		
Description of the Problem:	Undersized sluices– not long and wide enough for the roads. This chokes the road down and does not have proper headwalls. They are old and need to be replaced.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The sluices in the Town are old and need to be replaced. The Town will install larger sluice pipes along the following roadways: Hemmingway Road; Echo Lake Road; Wilson Hill Road; Rathbon Hill Road; and Travis Road. They will be installed under the roadway.		
Lead Agency:	Town Highway Department		
Supporting Agencies:	N/A		
Estimated Cost:	Medium (\$10,000 to \$100,000)		
Potential Funding Sources:	<i>Municipal Budget</i>		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 5		
Benefits:	Medium (\$10,000 to \$100,000); Increase capacity; reduce risk of water on roadways		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	All residents who live near or utilize the specified roads will be protected from flooding concerns during a severe storm or flood event.		
Impact on Critical Facilities/Lifelines:	The existing critical infrastructure is at risk of being compromised due to outdated systems. This action would update and protect a critical asset used to mitigate flood impacts.		
Impact of Capabilities:	This action would ensure the roadways are accessible for EMS and first responders during a flood event.		
Impact on Future Development:	This action will protect future development located near/around these roadways.		
Climate Change Considerations:	This action takes into consideration climate change impacts on the frequency and severity of flood events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists.
	Remove/elevate roadways.		Not feasible, not an option.
	Remove residential homes		Not feasible, not an option.



Action 2024-TriangleT-02. Harvey Square Road and Beavers

Action Name:	2024-TraingleT-02 (prev. Triangle Town – 3)	
Description of the Problem:	Harvey Square Road – huge wetland that DEC built; issues with beavers building dams which leads to flooding in this area.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Based on a previous study of the areas impacted by beaver activity the Town identified solutions to alleviate the flooding issues associated with the beavers. The Town will raise the roadway and install a guide rail to reduce and limit flooding and beaver activity.	
Lead Agency:	Town Highway Department	
Supporting Agencies:	NYSDEC	
Estimated Cost:	Medium (\$10,000 to \$100,000)	
Potential Funding Sources:	<i>Municipal Budget</i>	
Implementation Timeline:	Short Term (<5yrs.)	
Goals Met:	1, 5	
Benefits:	Medium (\$10,000 to \$100,000); Identify solutions to deal with beavers, and reduce or eliminate flooding in this area of the town once solutions are implemented	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	The roadway will be protected from flood issues and be safe and accessible to all residents and visitors.	
Impact on Critical Facilities/Lifelines:	This action will protect and restore a roadway which is a critical lifeline for those who live in the area.	
Impact of Capabilities:	This action will ensure that EMS and first responders have access to the community in this area by maintaining the roadway during a severe storm event.	
Impact on Future Development:	This action will ensure future development has access to the roadway during severe storm and/or flooding events.	
Climate Change Considerations:	This action considers the climate change impacts on the severity and frequency of flood events.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Problem persists
	Remove roadway	Not an option, costly.
	Remove beavers	Not environmentally friendly, not an option.



Action 2024-TriangleT-03. Gayhead Road Improvements

Action Name:	2024-TriangleT-03 (prev. Triangle Town – 4)	
Description of the Problem:	Gayhead Road (East Hill Rd) – a seasonal road that is in need of substantial work. A very steep road with a major rock outcropping	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Gayhead Road is a very steep road with a major rock outcropping. A study needs to be conducted to determine the types of projects needed to improve the road. One project would be widening the roadway and installing drainage improvements.	
Lead Agency:	Town Highway Department	
Supporting Agencies:	N/A	
Estimated Cost:	Medium (\$10,000 to \$100,000)	
Potential Funding Sources:	<i>Municipal Budget, CHIPS, PAVE NY</i>	
Implementation Timeline:	Short Term (<5yrs.)	
Goals Met:	1, 5	
Benefits:	Medium (\$10,000 to \$100,000); Identify solutions to improve this area of the town, increase safety measures to protect the roadway and residents	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	This action will ensure the safety of all residents and community members who utilize Gayhead Road.	
Impact on Critical Facilities/Lifelines:	This action will ensure the roadway is safely accessible during a hazard event so that community members can evacuate if needed.	
Impact of Capabilities:	This action will ensure that EMS and first responders are able to access residents during the time of a hazard event.	
Impact on Future Development:	This action will protect all future development in the areas around Gayhead Road.	
Climate Change Considerations:	This action takes into consideration climate change impacts on the severity and frequency of natural hazards that are present in the community.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action.	Problem persists.
	Remove roadway	Costly, not publicly accepted.
	Elevate roadway	The problem persists, costly.





Action 2024-TriangleT-04. Town Hall Backup Generator

Action Name:	2024-TriangleT-04 (prev. Triangle Town-5)		
Description of the Problem:	The Town Hall is a critical facility in the town and needs to operate during hazard events and power outages. It currently does not have backup power and cannot fully operate during power outages, which could be caused by downed trees or other structural damage caused by earthquakes, floods, severe storms, severe winter storms, and wildfires. Town Hall may also be vulnerable to outages caused by extreme temperature and drought events that affect the region's larger power grid if conditions reach a point where equipment breaks down (i.e., overheated equipment due to high temperatures or low water supplies).		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	Town Hall includes the Town of Triangle, Village of Whitney Point, and NYS Trooper offices, as well as the Broome County mobile DMV office. When there are power outages, the offices cannot function properly or provide services to meet the needs of residents. Purchase and install a propane-powered generator that will fully power the facility during power outages. This will allow for continuity of operations and allow all operations in the building to function during a power outage.		
Lead Agency:	Town Board		
Supporting Agencies:	N/A		
Estimated Cost:	High (> \$100,000)		
Potential Funding Sources:	HMGP		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 4, 5		
Benefits:	High (> \$100,000); Continuity of operations; provides services to residents during emergencies and power outages		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists.
	Microgrid		Costly and difficult to implement.
	Solar panels and battery backup		Solar power is unlikely to be able to provide battery power for extended failure events.





Action 2024-TriangleT-05. Highway Department Backup Generator

Action Name:	2024-TriangleT-05	
Description of the Problem:	The Town Highway Department facility is a critical facility in the town and needs to operate during hazard events and power outages. It currently does not have backup power and cannot fully operate during power outages, which could be caused by downed trees or other structural damage caused by earthquakes, floods, severe storms, severe winter storms, and wildfires. The Department may also be vulnerable to outages caused by extreme temperature and drought events that affect the region's larger power grid if conditions reach a point where equipment breaks down (i.e., overheated equipment due to high temperatures or low water supplies).	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will purchase and install a propane-powered generator that will fully power the Highway Department facility during power outages. This will allow for continuity of operations and allow highway services to operate properly during a power outage.	
Lead Agency:	Town Board and Highway Department	
Supporting Agencies:	N/A	
Estimated Cost:	High (> \$100,000)	
Potential Funding Sources:	HMGP	
Implementation Timeline:	Short Term (<5yrs.)	
Goals Met:	1, 4, 5	
Benefits:	High (> \$100,000); Continuity of operations; provides services to residents during emergencies and power outages	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Problem persist.
	Microgrid	Costly and difficult to implement.
	Solar panels and battery backup	Solar power is unlikely to be able to provide battery power for extended failure events.





Action 2024-TriangleT-06. Critical Facilities in the Floodplain

Action Name:	2024-TriangleT-06	
Description of the Problem:	The following Highway Bridges are critical assets for the Town and are located in the 1% and 0.2% flood levels: <ul style="list-style-type: none"> - Bridge 3349680 - Bridge 3349700 - Bridge 3349720 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will explore mitigation strategies to floodproof and protect these critical assets to the 1% and 0.2% flood levels.	
Lead Agency:	Town Engineering Department	
Supporting Agencies:	Town Highway Department	
Estimated Cost:	High	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	
Implementation Timeline:	Short (< 5 years)	
Goals Met:	1, 5	
Benefits:	Ensures the continuity of operations of the highway bridges.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	The protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	
Impact on Critical Facilities/Lifelines:	This action will protect highway bridges in the Town which are a critical facility, maintaining the critical services that they provide.	
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.	
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.	
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Problem persists
	Relocate highway bridges	Relocation is expensive and results in the loss or delay of critical services in the immediate area.
	Establish plans to enter into an MOU with neighboring critical facilities to provide service during flood events.	Reduction in response times and delay of critical services in the immediate area.



Action 2024-TriangleT-07. Socially Vulnerable Populations Outreach

Action Name:	2024-TriangleT-07		
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness of hazards, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget and HMGP		
Implementation Timeline:	Short (< 3 years)		
Goals Met:	1, 2, 3		
Benefits:	This action will ensure an individual is working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Rely on state or federal resources.		
	Use only a few methods of distribution.		





SECTION 9.

9.21 TOWN OF UNION

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Town of Union with reducing losses from future hazard events. This annex is not guidance on 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 Town of Union, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.21.1 Hazard Mitigation Planning Team

The Town of Triangle identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Planning Director of the community on the Broome County HMP Planning Partnership and Steering Committee 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.21-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.21-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Christopher Kylor, Planning Director Address: 3111 E. Main Street Endwell, NY 13760 Phone Number: 607-786-2985 Email: ckylor@townofunion.com	Name/Title: Marina Lane, Senior Planner Address: 3111 E. Main Street Endwell, NY 13760 Phone Number: 607-786-2926 Email: m.lane@townofunion.com
NFIP Floodplain Administrator	
Name/Title: John Freer, Code Enforcement Address: 3111 E. Main Street Endwell, NY 13760 Phone Number: 607-786-2920 Email: jfreer@townofunion.com	
Additional Contributors	
Name/Title: Marina Lane, Senior Planner Method of Participation: Planning Partnership KO Meeting	



9.21.2 Municipal Profile

The Town of Union is located in the southwest part of Broome County, NY. The Town of Union has a total area of 35.4 square miles. The Town of Union is located in the south-central part of Broome County, NY. The town is on the north side of the Susquehanna River and communities of Union form the western suburbs of Binghamton. New York State Route 17 crosses from the north to the south side of the Susquehanna in Union. New York State Route 26 and New York State Route 38B intersect by Union Center. NY-26 connects Union to the town of Vestal on the south side of the Susquehanna River. New York State Route 17C is an east-west highway in the southern part of Union. The town includes the hamlets of Choconut Center, Endwell, Union Center, West Corners, Westover, and West Endicott. The Village of Endicott and the Village of Johnson City are located within the Town of Union (Tetra Tech 2019). For more information on the Village of Endicott, refer to Section 9.10. For more information on the Village of Johnson City, refer to Section 9.12.

A Supervisor and a Town Council govern the Town of Union made up of four Council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Union was 27,128, a 2.3 percent decrease from the 2010 Census.

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 several 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 2020 U.S. Census American Community Survey indicates that 4.8 percent of the population is 5 years of age or younger, 23.2 percent is 65 years of age or older, 1.1 percent is non-English speaking, 9.4 percent is below the poverty threshold, and 12.4 percent is considered disabled.

9.21.3 Jurisdictional Capability Assessment and Integration

The Town of Union 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Union to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.21-2 summarizes the planning and regulatory tools that are available to the Town of Union. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.21-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 86, Building Code Administration December 6, 2006; Building Code of New York State (2020)	State and Local	Code Enforcement
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Chapter 86 provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in this Town. This chapter is adopted pursuant to § 10 of the Municipal Home Rule Law. Except as otherwise provided in the Uniform Code, other state law, or other sections of this chapter, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this chapter.</p> <p>The NYS Building Code is intended to establish provisions that adequately protect public health, safety, and welfare through the minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The 2020 edition is an update to the 2018 edition published by the ICC. It is part of the Uniform Fire Prevention and Building Code.</p>				
Zoning/Land Use Code	Yes	Chapter 300, Zoning May 4, 2011	Local	Code Enforcement
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The Zoning Ordinance implements the goals and objectives of the 2008 Unified Comprehensive Plan, which include:</p> <ul style="list-style-type: none"> A. Providing a wide variety of living environments for all socioeconomic groups in the population and a diversity of housing densities and types, ranging from rural low density to urban high density. B. Providing a sound commercial base, offering convenience, choice, and a wide variety of goods and services. C. Improving the economy by promoting new and expanded industrial enterprises, retaining existing enterprises, and redeveloping existing industrial facilities to further diversify the economic base and to provide for increased employment permanently. D. Providing a transportation network that is capable of moving people and goods efficiently and safely. E. Maintaining the infrastructure at a level needed to continue adequate services to Town and Village residents. F. Enriching the lives of all citizens by striving to improve the quality of the environment. G. Accommodating solar energy systems, equipment, and access to sunlight. 				
Subdivision Code	Yes	Chapter 181, Subdivision of Land February 7, 1990	Local	Code/Planning





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Chapter 181 states that the subdivision of land and the subsequent development of the subdivided land shall be subject to the control of the Town of Union and in accordance with the Future Land Use and Transportation Plan to ensure the orderly, planned, efficient, and economical development of the Town.</p> <p>Also, no land shall be subdivided within the Town of Union, outside the corporate limits of the Villages of Johnson City and Endicott, until the subdivider or authorized agent obtains approval of the final plan and subdivision plat from the Planning Board and until the plat is filed with the Broome County Clerk. No building permit shall be issued for any lot that was created by subdivision after the effective date of and not in conformance with the provisions of this chapter. No excavation of land nor construction of any improvements shall take place except in conformance with this chapter.</p>				
Site Plan Code	Yes	Chapter 300, article 63, Site Plan Review June 1, 2012	Local and County	Planning Dept./Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The site plan review process intends to preserve and enhance the character of a neighborhood, achieve compatibility with adjacent development, mitigate potentially negative impacts on traffic, parking, drainage, and similar environmental concerns, improve the overall visual and aesthetic quality of the Town and Villages, and increase the capability of the Zoning Ordinance to adapt to a variety of unique circumstances.</p>				
Stormwater Management Code	Yes	Chapter 171, Erosion and Sediment Control March 7, 2007	Local	Code Enforcement/Planning
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in § 171-1 hereof. This chapter seeks to meet those purposes by achieving the following objectives:</p> <ul style="list-style-type: none"> - Meet the requirements of Minimum Measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, or as amended or revised; - Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities, Permit No. GP-02-01, or as amended or revised; - Minimize increases in stormwater runoff from land development activities to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels; - Minimize increases in pollution caused by stormwater runoff from land development activities, which would otherwise degrade local water quality; - Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and - Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety. 				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>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</p>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	Yes	Chapter 109, Environmental Quality Review February 19, 1997	Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Chapter 109 regulates projects or physical activities, such as construction or other activities that may affect the environment by changing the use, appearance, or condition of any natural resource or structure, that: <ul style="list-style-type: none"> - Are directly undertaken by any agency; - Involve funding by an agency; or - Require one or more new or modified approvals from an agency or agencies. - Agency planning and policy-making activities that may affect the environment and commit the agency to a definite course of future decisions. - Adoption of agency rules, regulations, and procedures, including local laws, codes, ordinances, executive orders, and resolutions, that may affect the environment. - Any combination of the above. 				
Flood Damage Prevention Ordinance	Yes	Chapter 121, Flood Damage Prevention May 6, 1987	Federal, State, County, and Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: <ol style="list-style-type: none"> Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. Control filling, grading, dredging, and other development which may increase erosion or flood damages. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. Qualify for and maintain participation in the National Flood Insurance Program. 				
Wellhead Protection	Yes	Chapter 74, Aquifer Recharge and Watershed Protection Zone; Chapter 74-12, Zone I: Wellhead Protection Zone, January 7, 1998	Local	Code Enforcement
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The purpose and intent of establishing the wellhead, aquifer recharge, and watershed protection zones described below are to minimize the potential for contamination of the aquifer which currently supplies or in the future may supply water to the residents of the Town of Union. In promoting the general intent of these regulations, the specific intent is to: <ul style="list-style-type: none"> - Protect and maintain groundwater quality in the protection districts tributary to the wells that supply water to the residents of the Town of Union. - Protect the general health and safety of the residents of the Town of Union. 				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	Yes	NYS Residential Code (2010); R324.1.3.3 Freeboard	State, Local	Local Codes Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified. A freeboard shall not be required where it is not possible to obtain a design flood elevation from the FIRM or any method established above and the design flood elevation is three feet above the highest adjacent grade.				
Planning Documents				
General/Comprehensive Plan	Yes	Comprehensive Plan, 2010	Local	Planning Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Plan indicates the goals and protection for areas within the Town.				
Capital Improvement Plan	Yes	Capital Improvements Plan	Local	Public Works
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The CIP helps to create a blueprint for the Town's physical infrastructure, such as roads, bridges, and other major projects.				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	Yes	Chapter 121, 1987	Local	Planning/Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Floodplain Management Plan helps to reduce the impacts of flooding on the communities within the Town.				
Stormwater Management Plan	Yes	Stormwater Management Program Plan; Chapter 171-7 Stormwater Pollution Prevention Plans, 2007	Local	DPW
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Stormwater Management Program Plan for the Town describes best management practices for stormwater within the town and includes elements such as public education and outreach, illicit discharge detection and elimination, construction site runoff control, post-construction stormwater management, and pollution prevention for municipal operations. No application for approval of a land development activity shall be reviewed until the appropriate board has received a Stormwater Pollution Prevention Plan (SWPPP) prepared in accordance with the specifications in this chapter.				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	Yes	Comprehensive Plan, Transportation Chapter 9 (2010)	Local	Planning Dept
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The goals for the transportation plan, included in the comprehensive plan, are to increase the safety of transportation system for pedestrian and vehicular traffic; increase the accessibility and mobility options available; support economic vitality and growth; integrate various modes of transportation systems for people and freight; and emphasize the maintenance of existing transportation systems.				
Agriculture Plan	Yes	Comprehensive Plan, Agriculture Chapter 17 (2010)	Local	Planning Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The mission of the agriculture plan, within the comprehensive plan, is to protect and maintain agricultural activities as a land use option to preserve open space.				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	NYS 2019 State Hazard Mitigation Plan (SHMP)	State	NYSDHS
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> NYS (2019) - This portion of the CEMP addresses the State's overall hazard mitigation planning process, risk assessment, strategy development, and plan implementation. Having a FEMA-approved mitigation plan provides New York State and its communities access to the full range of post-disaster recovery programs and each of FEMA's five hazard mitigation programs to reduce the effect of similar events. It also allows New York State to identify ongoing mitigation opportunities and take maximum advantage of available Federal funding to implement mitigation measures at the State and local levels. The plan offers a source of natural hazard data and can serve as a guide in content and formatting as local plan writers prepare their mitigation plans and develop local strategies.				
Continuity of Operations Plan	Yes	Emergency Operation Plan, February 14, 2008	County	Broome County OEM
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	State	NYSDHS
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan (PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effects of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following: <ul style="list-style-type: none"> - identify community concerns; - provide an overview of environmental contamination and human exposures; - provide descriptions of actions that are being proposed to address community concerns; - assist stakeholders in prioritizing health agency and community activities; - describe opportunities for input from the community; - provide updates as new issues and concerns arise; - provide an overview of completed health studies in the Endicott area (Appendix C); - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and provide an overview of the stakeholder planning group (SPG).				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.21-3 summarizes the capabilities of the Town of Union to oversee and track development.

Table 9.21-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> • If you issue development permits, what department is responsible? • If you do not issue development permits, what is your process for tracking new development? 	Yes	The Town issues development permits for new construction.
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	SFHA





Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you have a buildable land inventory? • If you have a buildable land inventory, please describe	No	-
Describe the level of build-out in your jurisdiction.	N/A	There are some areas available for development within the Town.

Administrative and Technical Capability

Table 9.21-4 summarizes potential staff and personnel resources available to the Town of Union and their current responsibilities that contribute to hazard mitigation.

Table 9.21-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board shall have the following powers and duties. <ul style="list-style-type: none"> - Review authority. The Planning Board shall be responsible for reviewing and making recommendations regarding the following: <ul style="list-style-type: none"> - Amendments to the Zoning Map (rezoning); - Amendments to the text of this chapter; and - Applications for the creation of a Planned Unit Development District. - Final authority. The Planning Board shall be responsible for final action regarding applications for the following: <ul style="list-style-type: none"> - Major site plan review; and - Special use permits.
Zoning Board of Adjustment	Yes	The ZBA shall have the following powers and duties. (1) Final authority. The ZBA shall be responsible for final action regarding the following: <ul style="list-style-type: none"> (a) Applications for variances; (b) Administrative appeals; (c) Applications for temporary use permits; and (d) Amendments to restrictions enacted by the ZBA.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	As needed
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	The Economic Development Department provides financial assistance to start-up and expanding businesses through the Local Development Corporation of the Town of Union. The Town of Union Business Assistance (TUBA) Program, Central Business District (CBD) Program, Commercial Facade Program, Emerging Enterprise/Emerging Market Entrepreneurial (E ³), Microenterprise Program, Section 108 Program, and Site Preparation Program Funding are several



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		of the loan programs offered through the Local Development Corporation of the Town of Union.
Public Works/Highway Department	Yes	The Highway Department is responsible for the following: <ol style="list-style-type: none"> 1. Fleet management of over 160 vehicles. 2. Street paving and reconstruction. 3. Cleaning and repairing catch basins. 4. Traffic signal and sign maintenance. 5. Beginning the 2nd full week of April until the end of June, tree limbs from minor trimming or storm damage with a diameter between 2" - 6" stacked neatly with the larger end facing the street can be chipped by calling 786-2958. Fall chipping will commence the first full week of September and run until the 1st week of October.
Construction/Building/Code Enforcement Department	Yes	The Permits/Code Enforcement Department is responsible for the enforcement of the Town of Union Zoning Ordinances, the New York State Uniform Fire Prevention and Building Code, local laws and ordinances, and the Flood Damage Prevention Local Law.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Share equipment-DPW
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	The Planning Department has land development knowledge and is responsible for land management for the Town.
Engineers or professionals trained in building or infrastructure construction practices	Yes	The Town of Union Engineering Department is responsible for a multitude of services. <ul style="list-style-type: none"> • An annual curb and gutter and sidewalk replacement contract is made each spring to replace damaged curbs, gutter, and sidewalks. • The design and inspection of total street reconstruction and storm and sanitary sewer replacement projects. • Working directly with the Highway Department with their milling and resurfacing program to replace damaged curbs and gutters. • Review site plans to verify Town Code is being met. • Reviewing subdivision plans to verify Town Code is being met in addition to inspecting the construction



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<p>of subdivisions to confirm proper installation of utilities and roadways.</p> <ul style="list-style-type: none"> Assisting the general public with general engineering problems. Work directly with the Planning Department, Sewer Department, Parks Department, Code Enforcement/Permits, and Highway Department assisting with any engineering issues. <p>The Permits/Code Enforcement Department is responsible for the enforcement of the Town of Union Zoning Ordinances, the New York State Uniform Fire Prevention and Building Code, local laws and ordinances, and the Flood Damage Prevention Local Law.</p>
Planners or engineers with an understanding of natural hazards	Yes	The Planning Department is knowledgeable about natural hazards present in the Town.
Staff with expertise or training in benefit/cost analysis	Yes	Comptroller
Professionals trained in conducting damage assessments.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	The Planning Department has GIS capabilities.
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	Yes	-
Emergency Manager	Yes	The Commissioner of Public Works is the emergency manager for the Town.
Grant writer(s)	Yes	<p>Planning, Economic Development, and Town Supervisors office are grant writers for the Town.</p> <p><i>Consider the following:</i></p> <p>Are data and maps from the HMP used to support documentation in grant applications?</p>
Resilience Officer	No	-
Other (NFIP Floodplain Administrator (FPA))	Yes	The Permits/Code Enforcement Department is responsible for the enforcement of the Town of Union Zoning Ordinances, the New York State Uniform Fire Prevention and Building Code, local laws and ordinances, and the Flood Damage Prevention Local Law.

Fiscal Capability

Table 9.21-5 summarizes financial resources available to the Town of Union.

Table 9.21-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds.	Yes
Incur debt through special tax bonds.	Yes
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	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

Education and Outreach Capability

Table 9.21-6 summarizes the education and outreach resources available to the Town of Union.

Table 9.21-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Broome County
Natural disaster/safety programs in place for schools	No	-
Does the jurisdiction have any public outreach mechanisms/programs in place to inform citizens about natural hazards, risks, and ways to protect themselves during such events? <ul style="list-style-type: none"> If yes, please describe. 	No	-

Community Classifications

Table 9.21-7 summarizes classifications for community programs available to the Town of Union.

Table 9.21-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	8	10/1/2008, reverified 2018
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4/5 res	7/12/11
Public Protection (ISO Fire Protection Classes 1 to 10)	No	State and County	6 fire depts. Serve town
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-





Other	No	-	-
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Note:
 N/A Not applicable
 - Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.21-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.21-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

9.21.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.21-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.21-9 summarizes the NFIP statistics for the Town of Union.

Table 9.21-9. Town of Union NFIP Summary of Policy and Claim Statistics

# Policies	276
# Claims (Losses)	548
Total Loss Payments	\$23,158,435
# Repetitive Loss Properties (NFIP definition)	90
# Repetitive Loss Properties (FMA definition)	21





Severe Repetitive Loss Properties 16

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.21-10 provides a summary of the NFIP program in the Town of Union.

Table 9.21-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Westover, Riverside Drive, Route 17C, Fairmount Park, Parts of Endwell: By Main Street, Shady Drive, and streets near the river, Endwell, Glendale Drive, River Road, West Corners Union Center, Davis, Argonne, Verdun, Metz, Brookside, River Rd
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	Yes, we ask all interested homeowners during annual CRS mailings to contact us if interested.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	109 of 120 homeowners expressed interest in flood mitigation measures.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	None at this time.
How do you make Substantial Damage determinations?	Code Enforcement Office would make that determination by accessing each property affected.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	One was declared substantial.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	8 properties have been mitigated. Private funding, ARPA, CDBG-DR.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes, they adequately address the flood risk.



NFIP Topic	Comments
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement Office
Are any certified floodplain managers on staff in your jurisdiction?	Not at this time. Staff are currently looking to obtain certifications.
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes, the Town of Union does have access to resources.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Yes. The Town of Union would benefit greatly from increased assistance and training. Training/Assistance types required would be a basic introduction to more advanced training.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Code Enforcement office provides permit review and inspections, and the Planning Department conducts education/outreach on an annual basis.
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	If the project would expand its original footprint, add parking spaces, or increase the inhabitant's amount.
What are the barriers to running an effective NFIP program in the community, if any?	Having new staff with little to no experience is a major factor.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No, there are currently no outstanding NFIP violations for the Town of Union.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	April 2023.
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 121, 1987 of the municipal code.
What is the date that your flood damage prevention ordinance was last amended?	1987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Currently, the floodplain management program meets minimum requirements, but the Town is looking to exceed them moving forward.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Town Planning and Zoning boards both take into consideration efforts to reduce flood risk in the Town of Union.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The town of Union is active in the CRS Program & we are certainly looking to increase our CRS classification if possible.

9.21.5 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 9.21-11 through Table 9.21-13.





Table 9.21-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	1	1	22	24
Permits within SFHA	0	0	1	1
2020				
Total Permits	3	17	45	65
Permits within SFHA	0	17	1	18
2021				
Total Permits	4	0	46	50
Permits within SFHA	0	0	0	0
2022				
Total Permits	2	0	40	42
Permits within SFHA	0	0	0	0
2023				
Total Permits	2	0	16	18
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.21-12. Recent Major Development and Infrastructure from 2018 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
Fairmont Park Apartments	Residential	34 units	12 Oak Street, Johnson City, NY 13790 PARCEL ID # 142.11-1-20	Zone A/B	34-unit housing complex. Completed in November 2021.

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

Table 9.21-13. 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
Leisure Village Senior Housing	Residential	28 units	2100 Newell Road, Endwell, NY 13760 PARCEL ID # 141.11-6-3	N/A	TBD
Conifer Housing Project	Residential	75 units	4301 Watson Boulevard, Endwell, NY 13760 Parcel # 142.02-1-19	Zone AE	2024





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

9.21.6 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 Town of Union's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.21-1 through Figure 9.1.21-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Union has significant exposure. The maps show the location of potential new development, where available.



Figure 9.21-1. Town of Union Flood Hazard Area Extent and Location Map

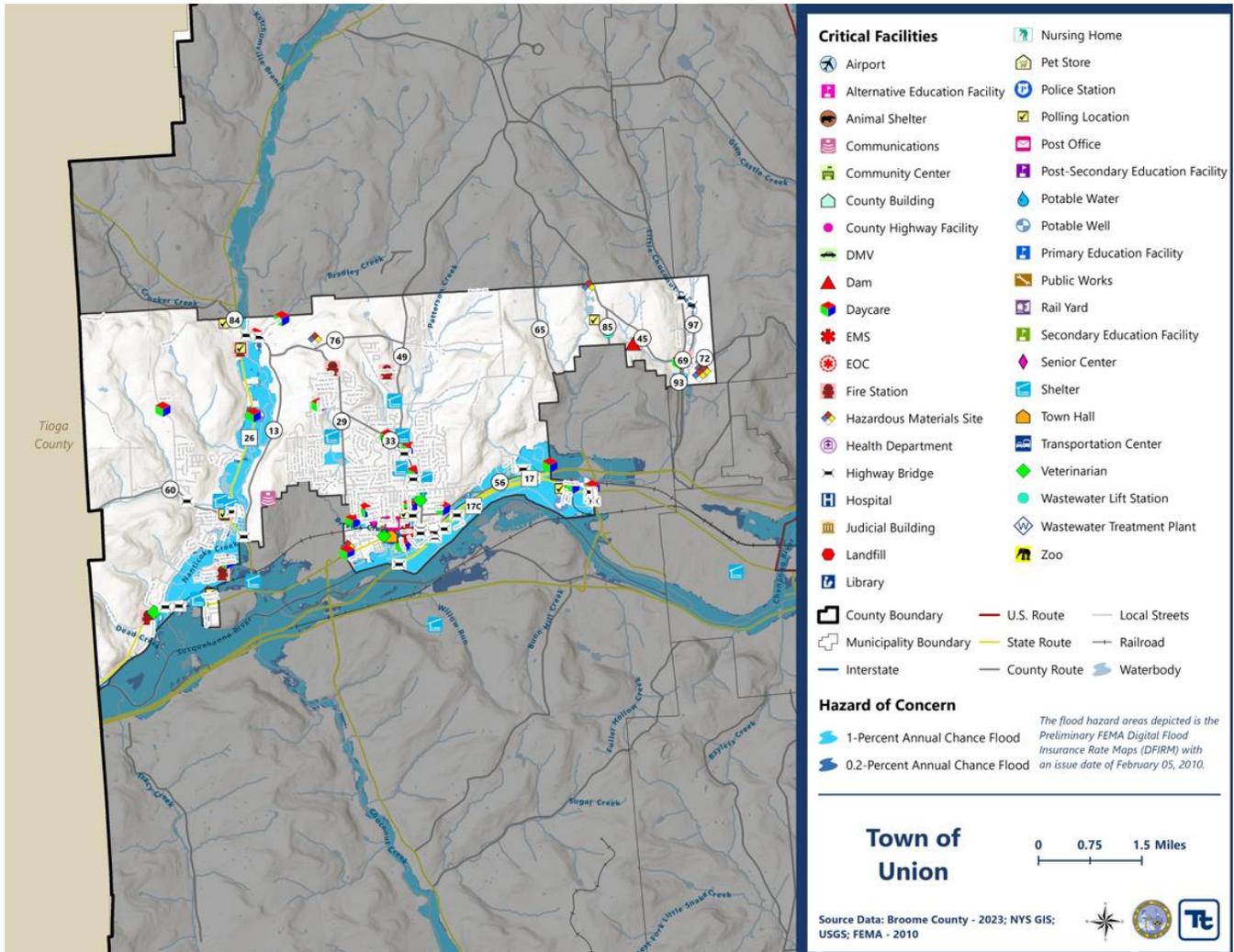
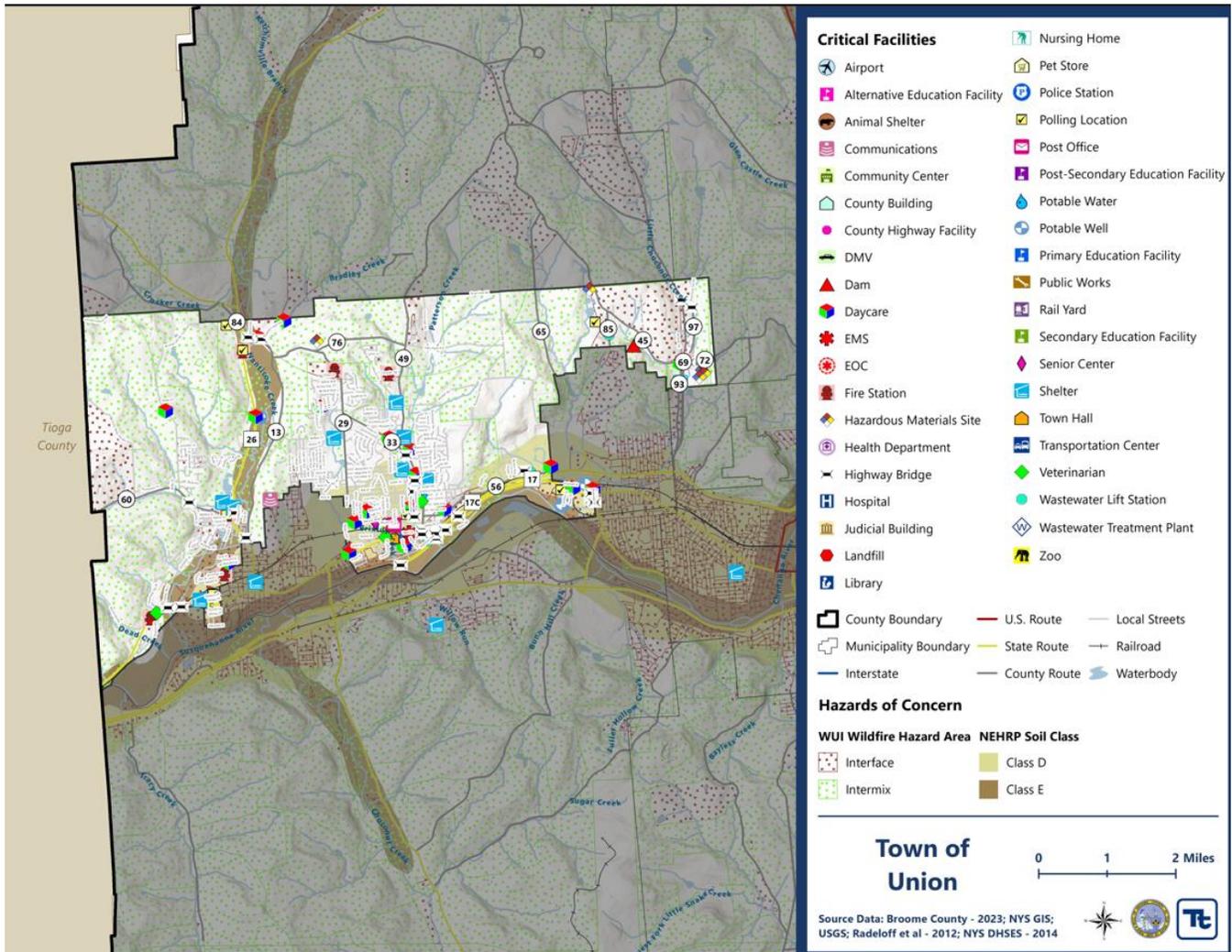




Figure 9.21-2. Town of Union NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Union is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.21-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.21-14. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
January 20, 2020 – May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town was subject to closures and social distancing/masking requirements.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	No damages were officially recorded for the Town. However, that does not mean damages or impacts did not occur within the Town.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	No damages were officially recorded for the Town. However, that does not mean damages or impacts did not occur within the Town.
December 17, 2020	Heavy Snow		Heavy snow, accumulation of approximately 40 inches. Brought down trees, and powerlines, resulting in widespread power outages throughout the Town of Union.	No damages were officially recorded for the Town. However, that does not mean damages or impacts did not occur within the Town.
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	No damages were officially recorded for the Town. However, that does not mean damages or impacts did not occur within the Town.

Notes:

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





Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Union.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Union 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 Town indicated the following:

The Town agrees with the hazard ranking in Table 9.12-15, as identified in the hazard ranking meeting. Table 9.21-15 shows the Union’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.21-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

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 9.21-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.21-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Trugreen Lawncare	Hazardous Materials Facility	Yes	Yes		





SECTION 9.21. Town of Union

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
WELL #5, FIFTH STREET	Potable Well	Yes	Yes		
Argonne Ave Pump Station	Wastewater Lift Station	Yes	Yes		
Watson Blvd Pump Station	Wastewater Lift Station	Yes	Yes		
Family Child Care	Daycare	Yes	Yes		
Child Care Center	Daycare	Yes	Yes		
Family Child Care	Daycare	Yes	Yes		
Johnson City YMCA	Polling Location	Yes	Yes		
Ann G McGuinness School	Shelter	Yes	Yes		
Bridge_1014260	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1014270	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1014300	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1054832	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1054851	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1054852	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1063161	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1063269	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1063270	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1063430	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1072990	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_2225740	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_2225790	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_3349750	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_3349780	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_3349790	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_3358710	Highway Bridge	Yes	Yes	-	The bridge was constructed to the 500-year flood level.
WELL #2, SOUTH OF PLANT	Potable Well	No	Yes		
WELL #3, NORTH OF PLANT	Potable Well	No	Yes		
Child Care Center	Daycare	No	Yes		
Family Child Care	Daycare	No	Yes		
Kalurah Shrine	Polling Location	No	Yes		
Bridge_1054841	Highway Bridge	No	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1054842	Highway Bridge	No	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1054860	Highway Bridge	No	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_1063162	Highway Bridge	No	Yes	-	The bridge was constructed to the 500-year flood level.
Bridge_3349740	Highway Bridge	No	Yes	-	The bridge was constructed to the 500-year flood level.

Source: Broome County, 2023

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

- Patterson Brixius Grey Watershed 1 Dam located in Endwell.
- Nanticoke Creek Site 13 Dam located in Bradley Creek.
- Little Choconut Site 2B Dam located in Little Choconut Creek.
- Little Choconut Site 1a Dam located in Susquehanna River.
- Patterson Brixius Grey Watershed 2 Dam located in Brixius Creek.





Identified Issues

After review of the Town of Union's hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Union identified the following vulnerabilities within their community:

- There are 87 Repetitive Loss Properties and 1 Severe Repetitive Loss Property within the Town of Union.
- A study and earmark grant for a floodwall is needed at Fairmont Park.
- Storm drainage improvements are needed to the McKinley Ave-Pine Street area to eliminate roadway flooding at key intersections.
- A stop-log closure is needed to protect the floodwaters approaching Watson Boulevard during severe flood events.
- Upgrades are needed to the Taft Avenue Sewer system. In September 2011, many businesses suffered structural and /or damage to essential capital components of their buildings due to flooding, especially in portions of the Westover, Main Street Endwell, and West Corners business districts. Several property owners have reported that their homes were subject to the backflow of sewer water into their homes during the September 2011 flood event.
- A drainage study is needed to evaluate the complex watersheds within the Town to promote a network of creek and stream gauges and limit excessive runoff during extreme flood events.
- A backup power supply (generator) is needed at the Town of Union Water Booster Station located on Fairview Street, Johnson City, which is utilized to supply water to the Broome County landfill and Greater Binghamton Airport.
- Westover Levee is prone to failure during severe flood events.
- The following critical facilities are located in the 500-year flood level:
 - Well #5 (Fifth Street)
 - Argonne Ave Pump Station
 - Watson Blvd. Pump Station

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*

9.21.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.21-17 indicates progress on the Town'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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.21-17, the Town of Union identified the following mitigation efforts completed since the last HMP:

- Scarborough Drive Highway & Refuse Facility has been relocated out of the floodplain.
- The pumping Station at Deitrich Avenue was upgraded and capacity expanded to exceed the flood waters from 2011. The back-flow prevention devices were also installed in the utility strip to alleviate the backup issues that were taking place.
- The Floodplain Management Plan has been updated.
- Rehabilitation program – a total of 8 applications were received, and an engineer was hired to inspect the foundation issues to provide plans and costs for repairs.
- Scatter Site Stream Bank Restoration – heavy stacked stone was placed to mitigate soil erosion.

Since the adoption of the County's first HMP, the Town of Union has made significant mitigation progress in the following areas:

- Stormwater Management
- Rehabilitation and relocation
- Nature-Based Solutions



Table 9.21-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Union Town-1	Repetitive Loss Property Mitigation	Flood, Severe Storm	Property Owners; Town of Union	The Town of Union has 87 homes that filed flood damage claims to the extent that they qualify as repetitive loss structures under the NFIP. The town will work with property owners to identify appropriate mitigation actions for each property. Actions will involve either acquisition and relocation or elevation of the structure to the appropriate elevation above the 100-year flood, including freeboard. This will include the Argonne neighborhood.	<ol style="list-style-type: none"> In progress. Challenges with funding availability. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The Town of Union has 87 homes that filed flood damage claims to the extent that they qualify as repetitive loss structures under the NFIP. The town will work with property owners to identify appropriate mitigation actions for each property. Actions will involve either acquisition and relocation or elevation of the structure to the appropriate elevation above the 100-year flood, including freeboard. This will include the Argonne neighborhood. N/A
Union Town-2	Scarborough Drive Highway and Refuse Facility Relocation	Flood, Severe storm	Town of Union Highway Department; Town of Union	The Scarborough Drive Highway and Refuse facility is located within the floodplain and has had a history of repetitive flood damage. Designed to house all the employees and equipment of the Refuse Department. The project design has been ongoing for the past two years and the groundbreaking is to begin in October 2018. Moving out of the floodplain. The facility will be located on Wayne	<ol style="list-style-type: none"> Completed. Scarborough Drive Highway & Refuse Facility has been relocated. 	<ol style="list-style-type: none"> Discontinue. N/A Completed.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Street. The facility will contain a backup generator to power the 1,200-square-foot facility.		
Union Town-3	Taft Avenue Sewer Upgrades	Flood, Severe Storm	Town of Union Water Department	A study has been completed showing inflow and infiltration (I&I) issues. Need to prevent I & I. The town has installed one backflow valve at a residential home. However, the town needs to reduce the I&I but needs to identify how to do that.	<ol style="list-style-type: none"> In Progress. The Town needs to work on identifying how to reduce the I&I. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The Town will conduct a feasibility study on the best action to reduce the inflow and infiltration (I&I) issues. N/A
Union Town-4	Protect Well #5, Fifth Street to the 500-year flood level	Flood	Facility manager, Town	The town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level.	<ol style="list-style-type: none"> No Progress. Challenges with staff availability. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The town will contact the facilities manager and discuss options for protecting Well #5 from the 500-year flood level. N/A
Union Town-5	Protect the Watson Boulevard Pump Station from the 500-year flood level	Flood	Facility manager, Town	The town will rebuild the station to be elevated to the 500-year flood level	<ol style="list-style-type: none"> No Progress. Challenges with staff availability. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The town will rebuild the Watson Boulevard Pump Station to be elevated to the 500-year flood level. N/A
Union Town-6	Protect access to the Ann G McGuinness	Flood	Village Floodplain Administrator	The town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level.	<ol style="list-style-type: none"> No progress. Challenges with staff availability. 	<ol style="list-style-type: none"> Keep in the 2024 HMP. The town will contact the facilities manager and discuss options for protecting the Ann



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	School to the 500-year flood level					G. McGuinness School from the 500-year flood level. 3. N/A
Union Town-7	Fairmont Park flood protection.	Flood	Town of Union DPW	Build a sectional gate on the flood control structure to supplement the existing flood protection system to the East. Design complete, expected to go out for bid in 2016	1. In progress. 2. Challenges with funding availability.	1. Keep in the 2024 HMP. 2. The Town will build a sectional gate on the Fairmont Park Flood Protection System, based on already completed designs. 3. N/A
Union Town-8	Provide funding to re-establish a uniform elevation for the existing Westover Levee.	Flood	Town of Union P&CD; DPW	Elevate and extend the levee. Permission to further elevate the structure to provide at least two feet of freeboard will be requested from NYS DEC.	1. In progress. 2. Challenges with staff availability.	1. Keep in the 2024 HMP 2. Elevate and extend the Westover Levee system to provide at least two feet of freeboard. 3. N/A
Union Town-9	Drainage repair and improvement of storm sewer system; rerouting of drainage to mitigate centralized flooding events	Flood	Town of Union DPW; BCOEM	This activity involves upgrades to the storm sewer system that follows the general line and grade of Brixius Creek.	1. In progress. 2. Challenges with staff availability.	1. Keep in the 2024 HMP. 2. The town will upgrade the stormwater sewer system along the Brixius Creek by rerouting the drainage to mitigate centralized flooding events in the area. 3. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Union Town-10	Address Wayne Street Sewer backup issues.	Flood	Town of Union DPW	Install back-flow prevention devices in the utility strip if they are deemed to be necessary and appropriate by the Town of Union. This issue may also be further addressed by another proposed project that will replace the pumping station on Deitrich Ave.	<ol style="list-style-type: none"> 1. Completed. 2. The Pumping Station at Deitrich Avenue was upgraded and capacity expanded to exceed the flood waters from 2011. The back-flow prevention devices were also installed in the utility strip to alleviate the backup issues that were taking place. 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Completed.
Union Town-11	Town-wide Drainage Study and Comprehensive Drainage Plan	Flood	Town of Union P&CD; DPW	The study will include a hydrologic analysis of the major watershed areas of the town and make recommendations for repairs and future capital improvement projects to minimize flood damage due to excessive runoff during significant storms.	<ol style="list-style-type: none"> 1. No progress. 2. Challenges with staff and funding availability. 	<ol style="list-style-type: none"> 1. Keep in the 2024 HMP. 2. The town will conduct a hydrologic analysis of the major watersheds in the area and make recommendations for repairs and future capital improvement projects aimed at minimizing flood damages due to excessive runoff. 3. N/A
Union Town-12	Update the Town's Floodplain Management Plan, and incorporate the Villages of Endicott	Flood	Town of Union P&CD; DPW	Update the Floodplain Management Plan. The new plan will also make recommendations for improving the town's Floodplain Development Ordinance.	<ol style="list-style-type: none"> 1. Completed. 2. N/A 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Completed.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	and Johnson City into the new plan.					
Union Town-13	Seek/ provide funding for rehabilitation programs for owner-occupied units.	Flood	Town of Union P&CD, CEO	A total of 8 applications were received; an engineer was hired to inspect foundation issues, provide plans and costs for repairs	1. Completed 2. N/A	1. Discontinue 2. N/A 3. Completed
Union Town-14	Assessment of Critical Facilities for Earthquake Vulnerability	Earthquake	Municipal Emergency Management, Fire, PD	Would need to hire a structural engineer to obtain training and conduct a rapid screening assessment of critical facilities for earthquake vulnerability.	1. No progress. 2. Challenges with funding availability.	1. Keep in the 2024 HMP. 2. The town will explore hiring a structural engineer to obtain training and conduct a rapid screening assessment of critical facilities for earthquake vulnerability. 3. N/A
Union Town-15	Develop a post-earthquake management plan.	Earthquake	Municipal Emergency Management, Fire, PD	Develop a plan to address building safety inspections, gas leaks, and other elements to protect public safety.	1. No progress. 2. Challenges with funding availability.	1. Keep in the 2024 HMP. 2. The town will develop a plan to address building safety inspections, gas leaks, and other elements to protect public safety. 3. N/A
Union Town-16	Scatter Site Stream Bank Restoration	Flood, Severe Storm	Town Engineer, Town DPW	This project would protect a 4,500-foot segment of West Creek located north of Day Hollow Road and a 6,400-foot segment of Patterson Creek located	1. Completed 2. N/A	1. Discontinue. 2. N/A 3. Completed.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				west of Hooper Road. Heavy stacked stones would be placed at selected locations to mitigate soil erosion.		
Union Town-17	Stormwater Outflow Pipe Backflow Prevention	Flood, Severe Storm	Town Engineer, Town Sewer, Town DPW	This project would install flap valves on stormwater outflows and create temporary stormwater storage areas on municipally-owned properties along Argonne Avenue. The flap valves would reduce the risk of backflow and the stormwater storage areas would reduce flood risk by containing additional stormwater volume. In addition to the flap valves and storage areas, the project would install approximately one mile of 42-inch HDPE pipe with pumps.	1. No progress. 2. Challenges with funding availability.	1. Keep in the 2024 HMP. 2. The Town will install flap valves on stormwater outflows and create temporary stormwater storage in municipally owned properties along Argonne Avenue. The flap valves would reduce the risk of backflow and the stormwater storage areas would reduce flood risk by containing additional stormwater volume. The Town also plans to install one mile of 42-inch HDPE pipe with pumps for added flood mitigation. 3. N/A
Union Town-18	Valleyview Drive Drainage Improvements	Flood, Severe Storm	Town Engineer, Town Sewer, Town DPW	This project would upgrade the stormwater drainage system along Valleyview Drive to mitigate flooding in the Town of Union. The improvements would focus on the main trunk stormwater sewer line by increasing its diameter and replacing sections of corrugated metal pipe with high-density polyethylene pipe or reinforced concrete elliptical pipe. In addition, a debris basin at the inlet of	1. No progress. 2. N/A	1. Keep in the 2024 HMP. 2. The town will upgrade the stormwater drainage system along Valleyview Drive to mitigate flooding in the area. Improvements will be made to the main stormwater sewer line by increasing diameter and replacing sections of corrugated metal pipe with high-density polyethylene pipe or reinforced



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				the system would trap and accumulate debris and bed material before it reaches the inlet.		concrete elliptical pipe. The town will also explore building a debris basin at the inlet of the system that will trap and accumulate debris before it reaches the inlet. 3. N/A
Town of Union -19	Barton Avenue Levee Extension	Dam/Levee failure, Flash Flooding, Flood	Town of Union	During Hurricane Irene and Tropical Storm Lee in 2011, floodwaters inundated the Fairmont Park neighborhood resulting in substantial damage to numerous homes. The project, which extends between the Fairmont Park subdivision and the Traditions at the Glen golf course, increased the level of protection by reducing the potential for future flooding of the Fairmont Park subdivision and associated damages during major flood events, by increasing the level of protection offered by the existing earthen levee that follows Barton Avenue by modifying and extending the levee a total of just over 600 feet to an elevation of 841 feet above sea level (a.s.l) to match the existing flood wall and road closure system across Watson Boulevard.	1. No Progress 2. Challenges with funding opportunities.	1. Discontinue. 2. N/A 3. Challenges with staff and funding availability.



Proposed Hazard Mitigation Initiatives for the HMP Update

Union participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Union 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 the Town’s priorities.

Table 9.21-18 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. Table 9.21-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.21-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure		X		X					X	X
Disease Outbreak		X								X
Drought		X								X
Earthquake		X								X
Extreme Temperature		X								X
Flood	X	X		X	X	X			X	X
Invasive and Nuisance Species		X								X
Severe Storm	X	X		X	X	X			X	X
Severe Winter Storm		X								X
Wildfire		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 stormwater 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 9.21-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-UnionT-01	Repetitive Loss and Severe Repetitive Loss Properties	1	1	1	1	1	1	0	1	0	1	1	1	1	1	12	High
2024-UnionT-02	Floodwall at Fairmont Park	0	1	0	1	1	1	0	1	0	0	1	0	1	1	8	Medium
2024-UnionT-03	Storm Drains at McKinley Ave to Pine Street	1	1	0	1	1	1	0	1	1	1	1	1	1	1	12	High
2024-UnionT-04	Stop Log Closure on Watson Boulevard	1	1	1	1	1	1	0	1	0	1	0	1	1	1	11	High
2024-UnionT-05	Sewer System Upgrades on Taft Ave	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-UnionT-06	Town-Wide Watershed Drainage Study and Drainage Plan	1	1	1	1	1	1	1	1	0	1	1	1	1	1	13	High
2024-UnionT-07	Generator for Water Booster Station	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2024-UnionT-08	Upgrades to Westover Levee	1	1	1	1	1	1	1	1	0	0	1	1	1	1	12	High
2024-UnionT-09	Privately Owned Critical Facilities in the Floodplain	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2024-UnionT-10	Outreach to High Hazard Dams	1	1	1	0	0	0	1	1	1	1	1	1	0	1	10	Medium
2024-UnionT-10	Critical Facilities in Floodplain	1	1	1	1	1	1	1	0	0	1	1	1	1	1	12	High

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



Action 2024-UnionT-01. Repetitive Loss and Severe Repetitive Loss Properties

Action Name:	2024-UnionT-01 (prev. Union Town-1)		
Description of the Problem:	There are 21 Repetitive Loss Properties and 16 Severe Repetitive Loss Properties within the Town of Union.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town of Union has 21 homes that filed flood damage claims to the extent that they qualify as repetitive loss structures under the NFIP. The town will work with property owners to identify appropriate mitigation actions for each property. Actions will involve either acquisition and relocation or elevation of the structure to the appropriate elevation above the 100-year flood, including freeboard. This will include the Argonne neighborhood.		
Lead Agency:	NFIP Floodplain Administrator, supported by homeowners		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and FMA, BRIC, local cost share by residents		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	3		
Benefits:	Eliminates flood damage to homes and residents, and creates open space for the municipality increasing flood storage.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Removing homes from the floodplain immediately removes the risk to life and property.		
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
Impact on Future Development:	Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No action	Problem persists
	Elevate Homes	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads.
	Elevate roads	Elevated roadways would not protect the homes from flood damage.



Action 2024-UnionT-02. Floodwall at Fairmont Park

Action Name:	2024-UnionT-02 (prev. Union Town-7)		
Description of the Problem:	A study and earmark grant for a floodwall is needed at Fairmont Park to address flooding concerns in the area.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will build a sectional gate on the Fairmont Park Flood Protection System, based on already completed designs.		
Lead Agency:	Engineering department		
Supporting Agencies:	N/A		
Estimated Cost:	Medium		
Potential Funding Sources:	<i>Tetra Tech will address</i>		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	3		
Benefits:	Reduction in flood risk.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	The floodwall will protect the community in the area from increased flood concerns.		
Impact on Critical Facilities/Lifelines:	The park is accessible to the entire community and a floodwall would protect this critical public space in the community.		
Impact of Capabilities:	This floodwall has the potential to ensure that first responders and EMS have access to the Park, in case assistance is needed.		
Impact on Future Development:	The floodwall would protect future development built around the park/served by the park.		
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of flood events.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Remove Park		Not feasible, no public space.
	Deploy sandbags		Costly and may not solve the problem.





Action 2024-UnionT-03. Storm Drains at McKinley Ave to Pine Street

Action Name:	2024-UnionT-03 (prev. Union Town-9)		
Description of the Problem:	Storm drainage improvements are needed in the McKinley Ave-Pine Street area to eliminate roadway flooding at key intersections.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The town will upgrade the stormwater sewer system along the Brixius Creek by rerouting the drainage to mitigate centralized flooding events in the area.		
Lead Agency:	Town of Union DPW; BCOEM		
Supporting Agencies:	Engineering Department		
Estimated Cost:	High (> \$100,000)		
Potential Funding Sources:	<i>Municipal budget</i>		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 3, 5		
Benefits:	Prevention of roadway flooding		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action would protect the community living near Brixius Creek from flooding impacts and drainage debris hazards.		
Impact on Critical Facilities/Lifelines:	This action would protect critical roadways that are evacuation routes for the community members during hazard events.		
Impact of Capabilities:	This action would ensure EMS and first responders have access to the community near Brixius Creek during a hazard event.		
Impact on Future Development:	This action would protect future development near Brixius Creek from debris hazards and floodwaters.		
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of flood events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Elevate roadway		Not feasible.
	Remove roadway		Not accepted publicly, loss of access to the area.





Action 2024-UnionT-04. Stop Log Closure on Watson Boulevard

Action Name:	2024-UnionT-04		
Description of the Problem:	A stop-log closure is needed to protect the floodwaters approaching Watson Boulevard during severe flood events.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Stop Log Closure Project - The Town of Union has received requests from numerous property owners in the Fairmont Park area regarding the construction of the final portion of the Flood Protection System previously installed. The Town will build a stop log closure across Watson Boulevard to the East of the existing closure. The existing closure protects from floodwaters approaching from the West, but the area remains vulnerable during extremely high floodwater occurrences from the East.		
Lead Agency:	Town of Union		
Supporting Agencies:	Engineering Department		
Estimated Cost:	Medium		
Potential Funding Sources:	<i>Municipal Budget</i>		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	1, 2		
Benefits:	Protection from floodwaters and access to community during flood events.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action would protect the community that resides on Watson Blvd from impacts due to floodwaters.		
Impact on Critical Facilities/Lifelines:	This action would ensure the roadways which are critical evacuation routes are operable during hazard events.		
Impact of Capabilities:	This action would ensure EMS and first responders have access to the community during flood events.		
Impact on Future Development:	This action would protect future development in the area from severe flooding events and floodwater damage.		
Climate Change Considerations:	This action takes into account climate change impacts on the frequency and severity of flooding concerns.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Deploy sandbags		User error, does not solve problem, short term solution
	Build levee		Not enough space, not accepted by public.





Action 2024-UnionT-05. Sewer System Upgrades on Taft Ave

Action Name:	2024-UnionT-05 (prev. Union Town-3)		
Description of the Problem:	Upgrades are needed to the Taft Avenue Sewer system. In September 2011, many businesses suffered structural and /or damage to essential capital components of their buildings due to flooding, especially in portions of the Westover, Main Street Endwell, and West Corners business districts. Several property owners have reported that their homes were subject to the backflow of sewer water into their homes during the September 2011 flood event.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct a feasibility study on the best action to reduce the inflow and infiltration (I&I) issues.		
Lead Agency:	Town of Union Water Department		
Supporting Agencies:	Town of Union		
Estimated Cost:	High (> \$100,000)		
Potential Funding Sources:	USDA Rural Development, Water and Environmental Program, HUD, CDBG, HMGP		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 5		
Benefits:	No more backflow, systems won't be inundated; protect residents' health; protect the environment.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This study would protect all residents in Taft Ave from sewer system failure during severe storm and flooding events.		
Impact on Critical Facilities/Lifelines:	This action would protect and mitigate the sewer system which is a critical facility for the Town.		
Impact of Capabilities:	This action would ensure that the sewer system is fully operational during a severe storm or flooding event.		
Impact on Future Development:	This action protects future development located near Taft Ave from sewer system failure.		
Climate Change Considerations:	This action takes into consideration climate change impacts on the severity and frequency of flooding.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Relocate homes		Not accepted by the public, not feasible
	Elevate homes		Does not solve the problem.





Action 2024-UnionT-06. Town-Wide Watershed Drainage Study and Drainage Plan

Action Name:	2024-UnionT-06 (prev. Union Town-11)		
Description of the Problem:	A drainage study is needed to evaluate the complex watersheds within the Town to promote a network of creek and stream gauges and limit excessive runoff during extreme flood events.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The town will conduct a hydrologic analysis of the major watersheds in the area and make recommendations for repairs and future capital improvement projects aimed at minimizing flood damages due to excessive runoff.		
Lead Agency:	Town of Union P&CD; DPW		
Supporting Agencies:	N/A		
Estimated Cost:	Medium (\$10,000 to \$100,000)		
Potential Funding Sources:	<i>Municipal budget</i>		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 3, 5		
Benefits:	Hydrologic analysis of major watersheds and recommendations for future drainage improvements		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action would protect the entire community of the Town and plan for sustainable watershed plan management practices to lessen the impacts of flood and severe storm events.		
Impact on Critical Facilities/Lifelines:	This action would protect critical facilities that are located near the watershed from flood concerns.		
Impact of Capabilities:	This action would ensure that first responders and EMS staff can safely respond to community needs in times of severe storm or flood events.		
Impact on Future Development:	This action would protect future development located near the watersheds through safe mitigation actions outlined in the drainage plan.		
Climate Change Considerations:	The study and plan will take into account climate change considerations on the severity and frequency of flooding.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Build flood walls around the watershed.		Not an option, not feasible.
	Build a levee		Not feasible, too much space.





Action 2024-UnionT-07. Generator for Water Booster Station

Action Name:	2024-UnionT-07		
Description of the Problem:	A backup power supply (generator) is needed at the Town of Union Water Booster Station located on Fairview Street, Johnson City, which is utilized to supply water to the Broome County landfill and Greater Binghamton Airport. Outages could be caused by downed trees or other structural damage as a result of earthquakes, floods, severe storms, severe winter storms, and wildfires. The station may also be vulnerable to outages caused by extreme temperature and drought events that affect the region's larger power grid if conditions reach a point where equipment breaks down (i.e., overheated equipment due to high temperatures or low water supplies).		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will install a backup generator for the Union Water Booster Station located on Fairview Street, Johnson City.		
Lead Agency:	Engineering Department; Public Works Department		
Supporting Agencies:	Broome County		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	1, 2		
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during power outages.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.		
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists





	Install solar panels	Weather dependent; need a large amount of space for installation; expensive if repairs needed.
	Install wind turbine	Weather dependent; poses a threat to wildlife; expensive repairs if needed





Action 2024-UnionT-08. Upgrades to Westover Levee

Action Name:	2024-UnionT-08 (prev. Union Town-8)		
Description of the Problem:	Westover Levee is prone to failure during severe flood events.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will explore upgrades, and implement those that are feasible, in mitigating levee failure at Westover Levee during severe storm flood events.		
Lead Agency:	Town of Union P&CD; DPW		
Supporting Agencies:	N/A		
Estimated Cost:	Low (< \$10,000); Dependent on areas of elevation and expansion.		
Potential Funding Sources:	HMGP, CDBG		
Implementation Timeline:	Short Term (<5yrs.)		
Goals Met:	1, 3, 5		
Benefits:	Protection of Westover neighborhood		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action will protect all residents of the Westover neighborhood from severe flooding and levee failure.		
Impact on Critical Facilities/Lifelines:	This action ensures the levee, a critical infrastructure, is protected from failure during a severe storm or flood event.		
Impact of Capabilities:	This action ensures EMS and first responders can access the Westover neighborhood to respond to hazard events. It also protects and ensures the levee is operable during a flood event.		
Impact on Future Development:	The levee protects future development, and this action would ensure the levee functions properly to mitigate flood impacts.		
Climate Change Considerations:	This action takes into consideration climate change impacts on the severity and frequency of flood events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Remove levee		Not an option
	Deploy sandbags		Does not solve the problem, of user error.





Action 2024-UnionT-09. Privately Owned Critical Facilities in the Floodplain

Action Name:	2024-UnionT-09 (prev. Union Town-6, Union Town-5, Union Town-4)	
Description of the Problem:	The following privately owned critical facilities are located in the floodplain: <ul style="list-style-type: none"> - Trugreen Lawncare - Family Child Care - Child Care Center 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town Engineering Department will conduct public outreach to property owners on flood mitigation and funding opportunities.	
Lead Agency:	Engineering Department	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Short (< 5 years).	
Goals Met:	1, 2	
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	N/A	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in better-informed facility managers of critical facilities that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action.	Problem persists
	Relocate facilities	Not possible.
	Build levees around facilities.	Costly, no space for a full levee system,





Action 2024-UnionT-10. Outreach to High Hazard Dams

Action Name:	2024-UnionT-10		
Description of the Problem:	<p>The following High Hazard Dams are in the Town of Kirkwood or neighboring jurisdictions:</p> <ul style="list-style-type: none"> • Patterson Brixius Grey Watershed 1 Dam located in Endwell. • Nanticoke Creek Site 13 Dam located in Bradley Creek. • Little Choconut Site 2B Dam located in Little Choconut Creek. • Little Choconut Site 1a Dam located in Susquehanna River. • Patterson Brixius Grey Watershed 2 Dam located in Brixius Creek. 		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will coordinate and participate in the discussion and outreach for mitigation solutions on the High Hazard Dams identified in the area.		
Lead Agency:	Broome County		
Supporting Agencies:	Town of Union		
Estimated Cost:	Low		
Potential Funding Sources:	<i>Municipal Budget</i>		
Implementation Timeline:	Short (<5 years)		
Goals Met:	2		
Benefits:	High hazard dam mitigation and public awareness for increased safety.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	This action would work to protect all residents and visitors located near the high-hazard dams of concern by mitigating dam failure.		
Impact on Critical Facilities/Lifelines:	This action would mitigate critical facilities (dams) located near the Town of Union and explore outreach options to promote public awareness and safety.		
Impact of Capabilities:	Public outreach would strengthen the town's capabilities to respond and ensure the safety of the community during a dam failure event.		
Impact on Future Development:	This action would protect future development located near a high-hazard dam.		
Climate Change Considerations:	This action takes into account climate change impacts on the severity and frequency of flooding.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action	Evaluation	
	No action	Problem persists	
	Remove dams	Not feasible.	
	Update dams	Not possible, not owned by Town.	





Action 2024-UnionT-11. Critical Facilities in Floodplain

Action Name:	2024-UnionT-11	
Description of the Problem:	The following critical facilities owned by the Town are located in the Floodplain: <ul style="list-style-type: none"> • Trugreen Lawncare • Family Child Care • Child Care Center 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will conduct a feasibility assessment to explore funding opportunities to floodproof these critical facilities to withstand the 0.2% flood level and implement the most cost-effective measures.	
Lead Agency:	Town, Engineering Department	
Supporting Agencies:	N/A	
Estimated Cost:	Low	
Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	
Implementation Timeline:	Short (< 5 years).	
Goals Met:	1, 2	
Benefits:	Protect public health and safety, and ensure continued operation of critical facilities and essential functions during flood events.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a flood event.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events resulting in more frequent flooding. This action accounts for a likely increase in flood events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	Do nothing.	Problem persists.





	Raingardens	Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.
	Deployable flood-barriers	Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.





Action 2024-UnionT-12. Socially Vulnerable Population Outreach

Action Name:	2024-UnionT-12		
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Municipal Budget, HMGP		
Implementation Timeline:	Short (< 3 years).		
Goals Met:	1, 2, 3		
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	This action would build upon the Town’s already existing public education and outreach program.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action.	Problem persists.
	Rely on state or federal resources.	
	Use only a few methods for distribution.	





9.22 TOWN OF VESTAL

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist the public and private sectors in the Town of Vestal with reducing losses from future hazard events. This annex is not guidance on 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 Town of Vestal, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.22.1 Hazard Mitigation Planning Team

The Town of Vestal identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Engineer represented the community on the Broome County HMP Planning Partnership and 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.22-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.22-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Vernon Myers, Town Engineer Address: 133 Front Street, Vestal, NY 13850 Phone Number: 607-786-0980 extension 209 Email: vmyers@vestalny.com	Name/Title: Lincoln Ellis, Code Enforcement Officer Address: 133 Front Street, Vestal, NY 13850 Phone Number: 607-786-0980 extension 203 Email: lellis@vestalny.com
NFIP Floodplain Administrator	
Name/Title: Lincoln Ellis, Code Enforcement Officer Address: 133 Front Street, Vestal, NY 13850 Phone Number: 607-786-0980 extension 203 Email: lellis@vestalny.com	
Additional Contributors	
Name/Title: Vern Myers, Town Engineer Method of Participation: Planning Partnership KO Meeting	
Name/Title: Method of Participation:	





9.22.2 Municipal Profile

The Town of Vestal is located in the southwest corner of Broome County, between the Susquehanna River and the Pennsylvania border. It covers an area of approximately 52.6 square miles. The Town is bordered to the north by the Susquehanna River and the Town of Union, to the south by the State of Pennsylvania, to the east by the City and the Town of Binghamton, and the west by Tioga County. The Town of Vestal is governed by a Supervisor and a Town Council made up of four Council members (Tetra Tech 2019).

Several hamlets are located in the Town, including Ross Corners, Tracy Creek, Twin Orchards, Vestal Center, Willow Center, Four Corners, South Vestal, and Vestal Hills. New York State Route 17 and NYS Route 434 run parallel east and west through the northern portion of the Town. NYS Route 17 and 434 intersects New York State Route 26 which runs north and south. New York State Route 201 intersects NYS Route 434 and travels north to New York State Route 17. According to the U.S. Census, the 2020 population for the Town of Vestal was 29,313, a 4.3% increase from the 2010 Census (28,043).

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 U.S. Census American Community Survey 5-year estimates indicates that 4.3 percent of the population is 5 years of age or younger, 17.4 percent is 65 years of age or older, 3.0 percent is non-English speaking, 11.3 percent is below the poverty threshold, and 10.3 percent is considered disabled.

9.22.3 Jurisdictional Capability Assessment and Integration

The Town of Vestal 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their



progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Vestal to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.22-2 summarizes the planning and regulatory tools that are available to the Town of Vestal. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.

Table 9.22-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 5, Buildings and Building Regulations (2007); Building Code of New York State (2020)	State and Local	Code Department and Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Chapter 5 of the municipal codes provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in the Town of Vestal. This local law is adopted pursuant to section 10 of the Municipal Home Rule Law. The NYS Building Code is intended to establish provisions that adequately protect public health, safety, and welfare through the minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The 2020 edition is an update to the 2018 edition published by the ICC. It is part of the Uniform Fire Prevention and Building Code.				
Zoning/Land Use Code	Yes	Chapter 24, Zoning (1966)	Local	Code Department and Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This chapter has been established in order to encourage the most appropriate use of land, conserve the value of property, and promote the health, safety, morals, and general welfare of the community; to regulate the location, use, and occupancy of buildings and the use of land for trade, industry, residence, and other uses; to regulate and limit the height and bulk of buildings and other structures; to regulate and determine the area of yards and other open spaces; to regulate the density of population and for such purpose, to divide the Town into districts; to provide for its enforcement and administration; and to prescribe penalties for the violation of its provisions. For planned development cluster districts, the Planning Board reviews the application to determine whether or not the development will occur in and around floodplains. Upon update of the zoning code, the Town will review the current HMP and integrate where applicable. This will help the Town promote development and redevelopment in areas less at risk from known hazards.				
Subdivision Code	Yes	Chapter 24, Zoning (1966), Appendix A, Subdivision Regulations August 15, 2006	Local	Code Department, Engineering, and Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Subdivision of land for various purposes have been promulgated to provide for the orderly growth and coordinated development of the Town and to assure the comfort, convenience, safety, health, and welfare of its people further, the approval of such subdivisions shall be based on the following considerations: <ul style="list-style-type: none"> • Conformance with the various parts of the comprehensive plan and the zoning ordinance of the municipal code; • Recognition of a desirable relationship to the general landform, its topographic and geologic character, to natural drainage and surface water runoff, and the groundwater table; Recognition of desirable standards of subdivision design including adequate provision for pedestrian and vehicle traffic, for public water supply and sanitary sewer, for surface water runoff and suitable building sites for the land use contemplated. 				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<ul style="list-style-type: none"> Provisions for such facilities as are desirable adjuncts to the contemplated use such as parks, recreation areas, school sites, fire stations, and off-street parking; and Review of subdivision plats shall consider general development standards and the guarantee of adequate future street access to other lands through the subdivided property. <p>For drainage system plans, design standards, and specifications, stormwater runoff or natural drainage cannot overland existing drainage systems or create flooding. Upon the next update of this ordinance, the Town will review the current HMP and integrate accordingly. By doing so, it encourages development applicants to submit plans that identify known hazards and how they will mitigate potential effects.</p>				
Site Plan Code	Yes	Chapter 24, Zoning (1966), Sec 24-84, Required (1966)	Local and County	Engineering and Planning Board
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>Prior to the Town issuing building permits, the applicant must submit a site plan to the Planning Board. The site plan must show:</p> <ol style="list-style-type: none"> The use, location, and dimensions of the proposed building and open space. The proposed layout of the street and other vehicular circulation facilities, including the location and width of driveways on the site and access to the existing and prospective roads and highways. The amount, location, and dimensions of off-street parking and loading areas and access thereto. The location and arrangement of any landscaping and transitional areas as set forth in section 24-203. A storm drainage plan as required in section 24-705. A topographical map of the lot or tract on which a building or buildings are proposed to be constructed, prepared, and certified by a professional engineer or land surveyor. The appropriate planning board application fee. Fees shall be prescribed from time to time by resolution of the town board. <p>During the next update of the site plan requirements, the Town will review the HMP to integrate aspects of the plan into the ordinance.</p>				
Stormwater Management Code	Yes	Chapter 6, Environmental Conservation, Sec 6, Article VI, Stormwater Erosion and Sediment Control February 7, 2007	Local	Engineering Department.
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in section 6-215 hereof. This local law seeks to meet those purposes by achieving the following objectives:</p> <ol style="list-style-type: none"> Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit no. GP-02-02 or as amended or revised. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised. Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality. Minimize the total annual volume of stormwater runoff that flows from any specific site during and following development to the maximum extent practicable; and Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management practices and ensure that these management practices are properly maintained and eliminate threats to public safety. 				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p>				
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY	State	NYS Department of State, Real Estate Agent





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
		Code - Article 14 §460-467		
<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.				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	Yes	Chapter 6 Environmental Conservation (1966)	Local	Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Chapter 6 includes regulations on freshwater wetlands, flood hazard areas, commercial tree harvesting, stormwater erosion and sediment control, and more. It also states the environmental quality review process and requirements for the Town.				
Flood Damage Prevention Ordinance	Yes	Chapter 6, Division 3 (Provisions for Flood Hazard Reduction); Chapter 6, Article 4 (Flood Hazard Areas)	Federal, State, County, and Local	Code Enforcement Officer
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
It is the purpose of this article to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:				
<ol style="list-style-type: none"> 1) Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities. 2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. 3) Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. 4) Control filling, grading, dredging, and other development which may increase erosion or flood damages. 5) Regulate the construction of flood barriers that will unnaturally divert floodwaters, or which may increase flood hazards to other lands. 6) Qualify and maintain participation in the national flood insurance program. 				
For new development or substantial improvements in the special flood hazard areas, the Town requires that the lowest floor be elevated to or above the base flood elevation.				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	NYS Residential Code (2010); R324.1.3.3 Freeboard	State, Local	Local Codes Office
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
A freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified. A freeboard shall not be required where it is not possible to obtain a design flood elevation from the FIRM or any method established above and the design flood elevation is three feet above the highest adjacent grade.				
Planning Documents				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
General/Comprehensive Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	Yes	Vestal Town Code Sec 6, Article VI, 2007	Local	Engineering Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Stormwater Management Plan works to eliminate the problem areas.				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Comprehensive Emergency Management Plan (CEMP)/Emergency Operations Plan (EOP)	Yes	Emergency Plan updated February 9, 2022.	Local and County	Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The CEMP provides a command center and equipment for emergencies.				
Continuity of Operations Plan	Yes	Emergency Plan adopt 3/22/2017; Emergency Operation Plan, February 14, 2008	Local and County	Supervisor
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Broome County EOP assigns responsibilities for actions to be taken at the local level by government and private organizations to reduce vulnerability to disaster and to establish effective response capabilities. Consistent with the model provided in the National Response Plan (NRP) and National Incident Management System (NIMS), the Plan can be partially or fully implemented for an anticipated or actual disaster.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	NYS Long-Term Recovery Plan (March 2023)	State	NYS
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This volume includes the provisions for implementing long-term recovery activities and functions, including mitigation, as provided for under the Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act and a variety of Federal-State programs. Volume 3 also recognizes the primacy of local governments in the implementation of long-term recovery plans and, depending on the nature and impact of the disaster, new programs that might be necessary to implement at the county or local level.				
Public Health Plan	Yes	The Public Health Response Plan T(PHRP)	Local, State, and County	NYSDOH, BCHD
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> A Public Health Response Plan (PHRP) is a written plan designed to document historic, ongoing, and planned public health actions being undertaken to address specific human exposure(s) to environmental contaminants. Health agencies, regulatory agencies (such as the New York State Department of Environmental Conservation (NYSDEC)), and community stakeholders will use the PHRP to help prioritize and evaluate the public health effect of environmental contamination. The PHRP helps to facilitate increased communication and understanding between the involved agencies and community stakeholders. The PHRP will do the following: <ul style="list-style-type: none"> - identify community concerns. - provide an overview of environmental contamination and human exposures. - provide descriptions of actions that are being proposed to address community concerns. - assist stakeholders in prioritizing health agency and community activities. - describe opportunities for input from the community. - provide updates as new issues and concerns arise. - provide an overview of completed health studies in the Endicott area (Appendix C). - give background on what proposed health studies can and cannot tell us, as well as describe how proposed studies will be conducted; and - provide an overview of the stakeholder planning group (SPG). 				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				





Development and Permitting Capability

Table 9.22-3 summarizes the capabilities of the Town of Vestal to oversee and track development.

Table 9.22-3. Development and Permitting Capability

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

Administrative and Technical Capability

Table 9.22-4 summarizes potential staff and personnel resources available to the Town of Vestal and their current responsibilities that contribute to hazard mitigation.

Table 9.22-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board’s responsibilities relate to building and development within the Town and is made up of five members and two alternates. Each member serves a five-year term. Specific responsibilities include: <ul style="list-style-type: none"> reviewing site plans for buildings to ensure that the plans comply with the code and law. Review and approve site plans prepared to specifications set forth in the Vestal zoning ordinance.
Zoning Board of Adjustment	Yes	The Zoning Board of Appeals (ZBA) is the administrative body appointed by the Town Board. ZBA does not have a legislative function but is of the province of the Town Board. Responsibilities of ZBA include: <ul style="list-style-type: none"> Functioning as a "safety valve" for rigid provisions of zoning codes and statutes. All zoning boards of appeals are directly given appellate jurisdiction by state law (NYS Town Law 267-b).
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	The Vestal Conservation Advisory Commission's (CAC) responsibilities include: <ul style="list-style-type: none"> Providing information and advice to the Town Board about environmental issues and conservation of natural features.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Highway Department's responsibilities include: <ul style="list-style-type: none"> - Maintaining 135 miles of roadways. Including paving and maintenance of roads, signage, roadway markings, drainage, tree and brush cutting, and the disposal of non-domestic dead animals. Keep roads clear of ice and snow during the winter seasons.
Construction/Building/Code Enforcement Department	Yes	The Code Department is responsible for building/construction. The Engineering Department monitors new site construction.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department is responsible for the yearly maintenance of the storm system. The Parks Department is responsible for the maintenance of buyout properties.
Mutual aid agreements	Yes	Water and Sewer Department, Highway Department, and Fire Department (Ambulance)
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	The Engineering Department is responsible for: <ul style="list-style-type: none"> - Surveying and design work. - New project development and review. - Inspection of projects. Water/sewer/storm drainage maps and records. <ul style="list-style-type: none"> • Street map, tax map, R.O.W., and flood plain information. • Street opening and sewer permits. • Water/sewer/storm/light district petitions and records. • Bridge inspection. • Sharing of services with other government agencies and private firms. • Traffic light maintenance. • Street light maintenance. • Sidewalk repair contracts.
Engineers or professionals trained in building or infrastructure construction practices	Yes	The Code Enforcement Department is responsible for construction practices. The Engineering Department is responsible for: <ul style="list-style-type: none"> - Surveying and design work. - New project development and review. - Inspection of projects. - Water/sewer/storm drainage maps and records.





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<ul style="list-style-type: none"> - Street map, tax map, R.O.W., and flood plain information. - Street opening and sewer permits. - Water/sewer/storm/light district petitions and records. - Bridge inspection. - Sharing of services with other government agencies and private firms. - Traffic light maintenance. - Street light maintenance. - Sidewalk repair contracts.
Planners or engineers with an understanding of natural hazards	Yes	<p>The Code Enforcement Officer (Lincoln Ellis) is responsible for understanding the natural hazards within the Town.</p> <p>The Engineering Department is responsible for:</p> <ul style="list-style-type: none"> - Surveying and design work. - New project development and review. - Inspection of projects. - Water/sewer/storm drainage maps and records. - Street map, tax map, R.O.W., and flood plain information. - Street opening and sewer permits. - Water/sewer/storm/light district petitions and records. - Bridge inspection. - Sharing of services with other government agencies and private firms. - Traffic light maintenance. - Street light maintenance. - Sidewalk repair contracts.
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Thomas McCartney Director of Emergency Management is the emergency manager for the Town.
Grant writer(s)	Yes	Contracted out on term agreement.
Resilience Officer	No	-
Other: NFIP Floodplain Administrator (FPA)	Yes	The Code Enforcement Officer is the current Floodplain Administrator (Lincoln Ellis)

Fiscal Capability

Table 9.22-5 summarizes financial resources available to the Town of Vestal.





Table 9.22-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	Yes
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Education and Outreach Capability

Table 9.22-6 summarizes the education and outreach resources available to the Town of Vestal.

Table 9.22-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Facebook
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	A part of the County 911 system.
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.22-7 summarizes classifications for community programs available to the Town of Vestal.





Table 9.22-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4-1 and 2 family 3-for all other	9/29/2016
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4/4Y	7/25/2016
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	Yes	-	3/2/2022
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.22-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.22-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive Species	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

9.22.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.22-1 is responsible for maintaining this information.





National Flood Insurance Program (NFIP) Summary

Table 9.22-9 summarizes the NFIP statistics for the Town of Vestal.

Table 9.22-9. Town of Vestal NFIP Summary of Policy and Claim Statistics

# Policies	347
# Claims (Losses)	487
Total Loss Payments	\$24,216,989
# Repetitive Loss Properties (NFIP definition)	71
# Repetitive Loss Properties (FMA definition)	21
# Severe Repetitive Loss Properties	16

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.22-10 provides a summary of the NFIP program in the Town of Vestal.

Table 9.22-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Any land area susceptible to being inundated by water from any source during a 100-year flood as defined by FEMA, FHADs, or channels or drainageways with tributary areas that are 130 acres or greater.
Do you maintain a list of properties that have been damaged by flooding?	Maintain a list of major floods of 2006 and 2011
Do you maintain a list of property owners interested in flood mitigation?	No, the Town does not maintain a list of property owners interested in flood mitigation.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	The number of homeowners interested in mitigation is unknown at this time.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No, there are no current projects underway.
How do you make Substantial Damage determinations?	The Town assists with field inspection and damage estimates.





NFIP Topic	Comments
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Unknown, at this time.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	14 in 2006 57 on 2011
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes, the flood maps adequately address flood risk within the Town.
NFIP Compliance	
What local department is responsible for floodplain management?	Building and Code Department is responsible for floodplain management within the Town.
Are any certified floodplain managers on staff in your jurisdiction?	No, there are no certified floodplain managers on staff for the Town.
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes, the Town has access to resources to determine future flooding concerns for the Town.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	No, there are no needs at this time.
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	All but the Engineering Department.
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	The cost of Construction is used to determine qualification.
What are the barriers to running an effective NFIP program in the community, if any?	Training and staffing is a challenge for the Town.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No, there are no outstanding NFIP compliance violations at this time.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	The most recent CAV or CAC is unknown at this time.
What is the local law number or municipal code of your flood damage prevention ordinance?	LL2
What is the date that your flood damage prevention ordinance was last amended?	1987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	The floodplain management program for the Town meets the minimum requirements.
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes. The Planning Board and Zoning Board consider flood risk in their reviews. As well as the Code Department with Building Permits.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Town is unsure at this time.



9.22.5 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 9.22-11 through Table 9.22-13.

Table 9.22-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2020				
Total Permits	3	0	2	5
Permits within SFHA	0	0	0	0
2021				
Total Permits	4	0	9	13
Permits within SFHA	0	0	0	0
2022				
Total Permits	2	0	6	8
Permits within SFHA	0	0	0	0
2023				
Total Permits	6	0	4	10
Permits within SFHA	0	0	0	0

SFHA Special Flood Hazard Area (1% flood event)

Table 9.22-12. Recent Major Development and Infrastructure from 2018 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
Vestal Chateau	Residential	30/2	2040 NYS Route 26	none	Senior Housing/In construction
Enterprise Rent-a-Car	Commercial	2 structures	2909 Vestal Road	none	Rental Car and Service garage. 12/2020
Home Central	Commercial	1 structure	140 N. Main Street	none	Completed 10/2021
BJCSTP Pump Station	Municipal	1 structure	3936 Gates Road	Flood	Completed 5/2021
Tru Hotel	Commercial	1 structure	3512 V.P.E	None	Completed 11/2019

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



Table 9.22-13. 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
Dollar General	Commercial	1 structure	2301 Vestal Parkway West	none	
Vestal Storage Facility	Commercial	6 structures	3201 Stewart Road	none	Completed 4/21
Vestal EMS	Municipal	1 structure	320 Vestal Parkway East	none	Completed 5/23
Vestal EMS	Municipal	1 structure	320 Vestal Parkway East	none	Completed 5/23
Vestal Fire Dept #4	Municipal	1 structure	118 Jensen Road	none	Completed 2/24
Vestal Beverage & Redemption Center	Commercial	1 structure	1430 NYS Route 26S	none	Completed 3/23
7 Brew Coffee	Commercial	1 structure	100 Plaza Drive	none	Completed
The Retreat at Bunn Hill	Residential	161/67 structures	791-833 Bunn Hill Road	none	In construction
Vision Bank	Commercial	1 structure	2521 V.P.E	None	Completed 5/22
Qdoba	Commercial	1 structure	2512 V.P.E	None	In Construction

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

9.22.6 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 Town of Vestal’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Vestal has significant exposure. The maps show the location of potential new development, where available.





Figure 9.22-1. Town of Vestal Flood Hazard Area Extent and Location Map

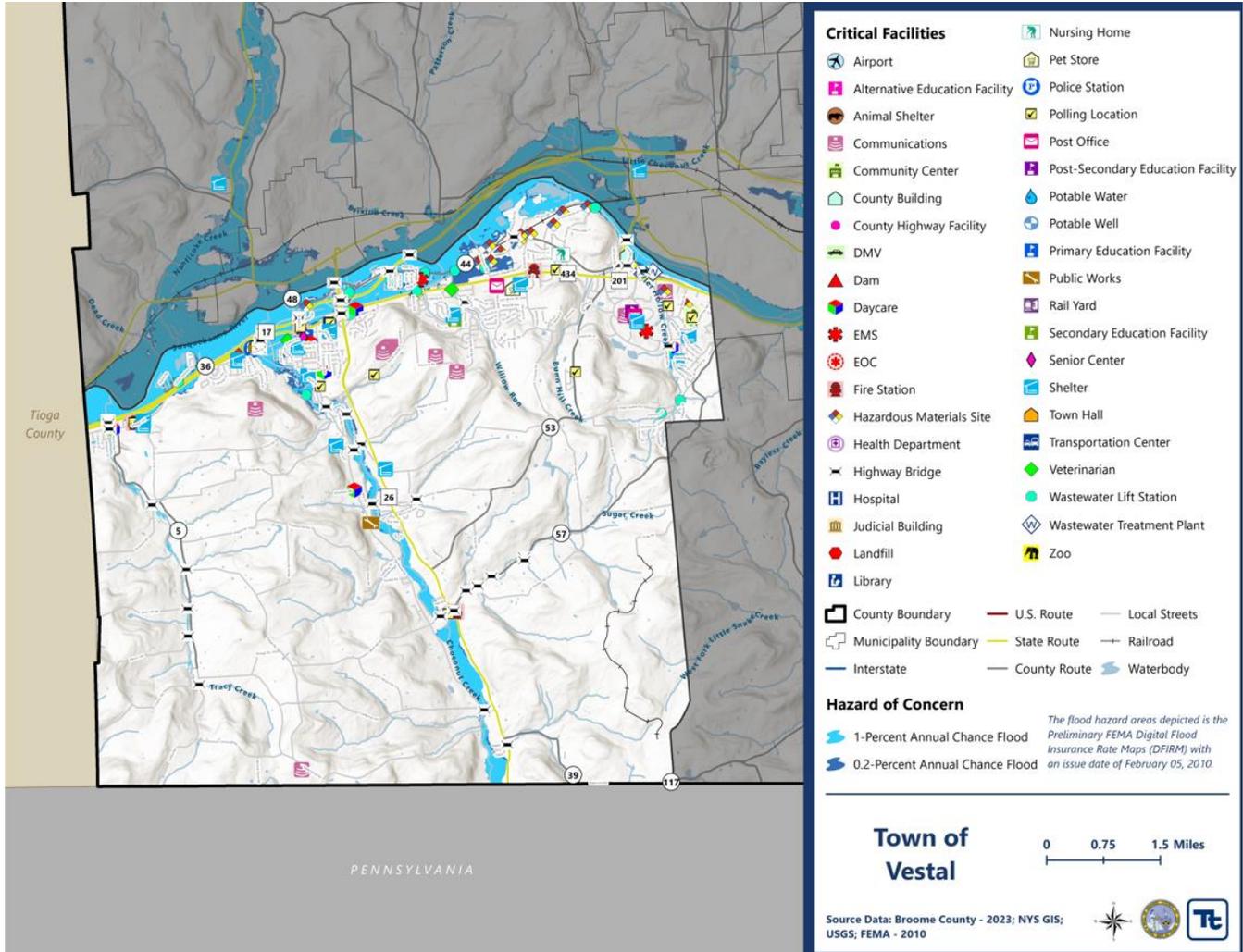
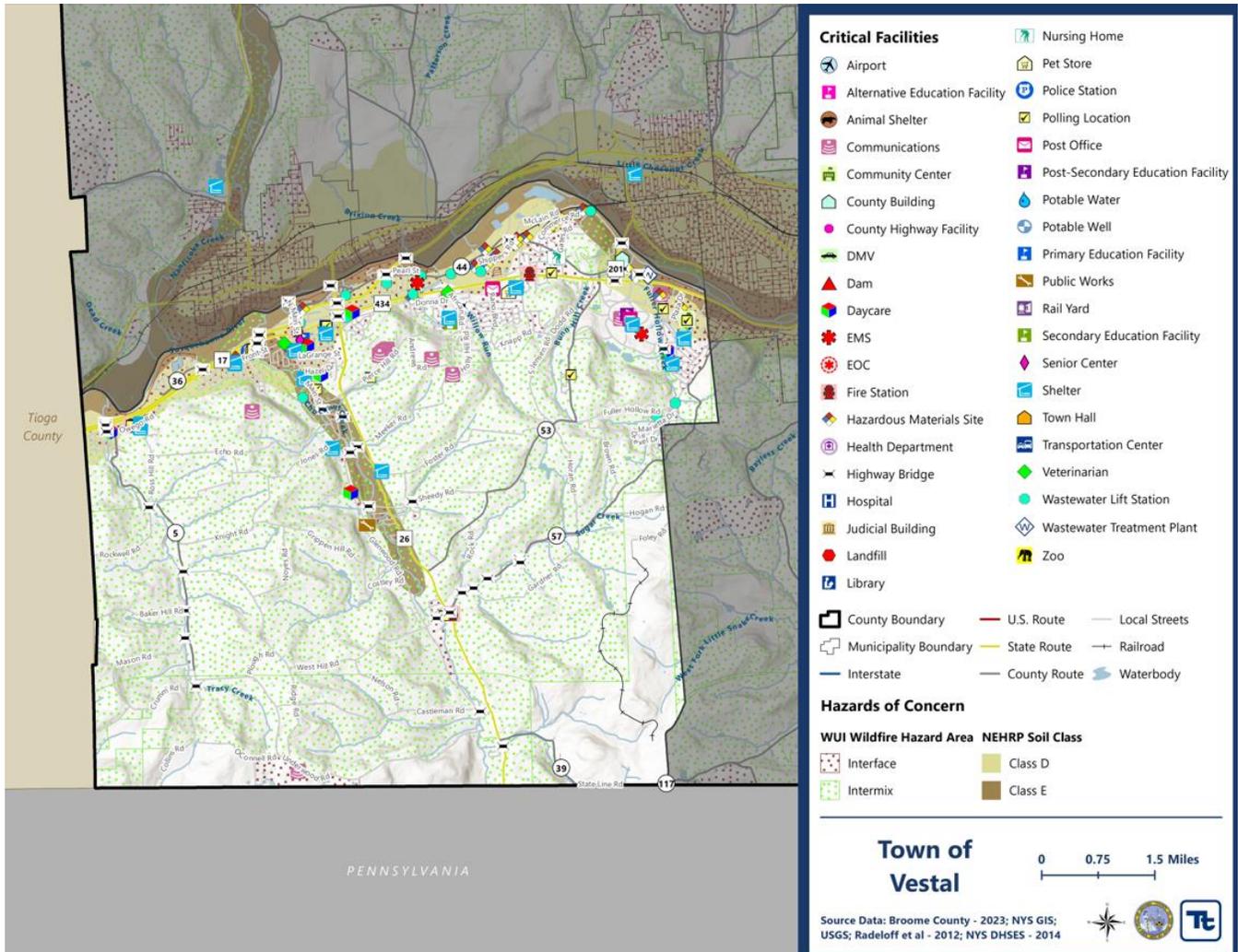




Figure 9.22-2. Town of Vestal NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Vestal is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.22-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.22-14. Hazard Event History in the Town of Vestal

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
January 20, 2020 – May 11, 2023	Coronavirus pandemic (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town was subject to closures and social distancing/masking requirements.
August 2018	Severe Storms and Flooding (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.	Evacuations by emergency services along Choconut Creek. Roads closed at bridge crossings. Damage to existing bank protection with continued erosion of Choconut Creek throughout. Town Park infrastructure was damaged at Vestal Center Park, David Avenue Park, Harold Moore Park, and Jones Park. Sanitary Sewer line exposed in Choconut Creek near Front Street, Circle Drive, and Raylene Drive. Stateline creek: Overtopped damage along Stateline Road included damage to the roadway, shoulders, cross pipes, and ditches. Damage to Underwood Road, Castleman Road, Glenwood Road, Jones Road, Echo Road. Total infrastructure damages are estimated at \$514,379.45. FEMA Public Assistance was requested with other municipalities through Broome County.

Notes:

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





Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Vestal.

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Vestal 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 Town indicated the following:

- Extreme Temperature should be ranked Medium for the Town.
- Flood should be ranked High for the Town.

Table 9.22-15 shows Vestal’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.22-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	Medium
Invasive Species	Medium
Flood	High
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.22-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.



Table 9.22-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Vestal Company 1	Fire	Yes	Yes	2024-VestalT-01	-
CITGO Vestal Terminal*	Hazardous Materials	No	Yes	-	-
SAM'S CLUB #6366*	Hazardous Materials	No	Yes	-	-
Superior Plus Energy Services – Warners*	Hazardous Materials	Yes	Yes	-	-
Vestal Terminal (BETZL)	Hazardous Materials	No	Yes	2024-VestalT-01	-
African Road Pump Station	WW Pump	No	Yes	2024-VestalT-01	-
Castle Gardens Pump Station	WW Pump	No	Yes	2024-VestalT-01	-
Circle Drive Pump Station	WW Pump	Yes	Yes	2024-VestalT-01	-
Midas Pump Station	WW Pump	No	Yes	2024-VestalT-01	-
Myrtle Street Pump Station	WW Pump	Yes	Yes	2024-VestalT-01	-
Valley Road Stormwater Pump Station	WW Pump	Yes	Yes	2024-VestalT-01	-
River Road Pump Station	WW Pump	Yes	Yes	2024-VestalT-01	-
Stage Road Pump Station	WW Pump	Yes	Yes	2024-VestalT-01	-
Sycamore Road Pump Station	WW Pump	No	Yes	2024-VestalT-01	-
Third Avenue Pump Station	WW Pump	Yes	Yes	2024-VestalT-01	-
Child Care Center*	Daycare	No	Yes	-	-
Drovers Inn*	Historic	No	No	-	-
Rounds House*	Historic	Yes	Yes	-	-
Rounds Coal Company Building*	Historic	No	Yes	-	-
Vestal Center United Methodist Church*	Historic	Yes	Yes	-	-
Rounds Cemetery*	Historic	No	Yes	-	-
Cold Springs Farm House*	Historic	Yes	Yes	-	-
Mersereau House*	Historic	Yes	Yes	-	-
Vestal Mobile Home Park	Historic	Yes	Yes	2024-VestalT-01	-
Stewart Four Cities Trailer Park	Mobile Home Park	No	Yes	2024-VestalT-01	-





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Vestal Fire Company 1	Municipal	No	Yes	2024-VestalT-01	-
Vestal Center Methodist Church*	Polling	Yes	Yes	-	-
Glenwood Elementary School*	Polling	No	No	-	-
Southern Tier Veterinary Associates*	Animal Shelter	No	No	-	-

Source: Hazus 4.2

- No estimated damages calculated by HAZUS-MH

* The Town of Vestal reviewed the list of critical facilities and determined that hazardous material facilities, daycares, historic facilities, veterinarians, animal shelters, and polling locations were not critical for essential services. As a result, the Town of Vestal did not develop mitigation actions to protect those facilities from the 500-year flood level.

Identified Issues

After review of the Town of Vestal’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Vestal identified the following vulnerabilities within their community:

- The following critical facilities owned by the Town are located in the Floodplain:
 - Vestal Company 1
 - African Road Pump Station
 - Myrtle Street Pump Station
 - Midas Pump Station
 - Valley Road Stormwater Pump Station
 - River Road Pump Station
 - Stage Road Pump Station
 - Sycamore Road Pump Station
 - Third Avenue Pump Station
- A current USACE study has found that the Town’s flood walls do not meet the criteria.
- Choconot Creek: The erosion problem along the creek threatens the water, sewer, and roads.
- There is extensive flooding to the Town Hall and Police Department Buildings.
- Flood walls at Roberts Street, Pumphouse Road, NYSDEC Flood Pond, and Twin Orchards area are at risk.
- Need a permanent generator for existing storm pump station at Valley Road.
- Need crossover pipes and new ditches on country roads that have steep grades, to limit ditch distances.
- Fire Station #2 needs to be floodproofed.
- The existing levee system within the Town is vulnerable to rapid catastrophic failure associated with flooding, no simulations of rapid notification or evacuation have been exercised.





- The Town was vulnerable to the COVID-19 pandemic. Clear direction on all facets of local municipal operations and municipal responsibilities needs to be disseminated by the County and State hierarchy.
- Revisions and updates are needed to the Town’s Emergency Operation Plan.
- Need for a new potable water source well.
- Not all staff in the field are cognitive in invasive species identification.
- The Town does not have a place for snow cleared away from water bodies during severe storm events, except within the floodplain near the Susquehanna River
- The Town is not participating in the CRS program.
- The following critical facilities are privately owned and are located in the Floodplain:
 - Vestal Mobile Home Park
 - Stewart Four Cities Trailer Park
 - Vestal Termina; (BETZL)

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

- Main Street
- Twin Orchards
- Castle Gardens
- State Line Road Vestal
- Vestal Center near the Vestal Center Park
- Old Vestal Road
- Sycamore Road
- Town Square
- Steward Park
- Pierce Hill near African Road
- Vestal Parkway
- Murray Hill Road
- Rail Trail Areas
- Front Street Vestal
- 4 Corner Vestal (Main & 434)
- Richard’s and Tharp
- Country Club Road
- Echo Road



9.22.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.22-17 indicates progress on the Town'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.

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in Table 9.22-17, the Town of Vestal identified the following mitigation efforts completed since the last HMP:

- Circle Drive Pump Station Electrical service raised to protect from 500-year flooding.
- Stage Road Pump Station electrical service raised to protect from 500-year flooding.
- Vestal EMS relocated to a new facility in 2023. Vestal EMS is no longer in the floodplain nor subject to flooding
- Local Flood Plain Ordinance follows NY State Building Code
- Parks Department is no longer in floodplain nor subject to flooding

Since the adoption of the County's first HMP, the Town of Vestal has made significant mitigation progress in the following areas:

- Understanding of where vulnerabilities are along the existing floodwalls of the Susquehanna, Choconut Creek, and Willow Run Creek.
- Activate the Town's Emergency Operation Center to address impacts.
- Town workforce available to enact emergency operations.
- Increased Emergency Operation Center coordination with County/State resources.
- The Towns Water System capacity and control have been enhanced. The Town adopted an Emergency Plan that incorporates drought coordination with all departments.
- Enhanced capacity to mobilize emergency responders. The Town's Department crews' capacity for recovery of critical resources such as water system and transportation resources has been updated.
- The continuance of strict adherence to Building Codes that address construction.
- Town Department managers fully understand their roles and needs in addressing all stages of flood from initial warning, hierarchy of impacted locations and areas, critical needs, and recovery.
- New brine program helps to pretreat major Town roads and reduce/save salt for severe events. Coordination of department managers and staff to assist highway if needed.
- Enhanced water systems' ability to move water to different geographical areas.



Table 9.22-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Vestal Town-1	Protect the Vestal Fire Company 1 to the 500-year flood level	Flood	Town Fire Department	Flooding in 2011 impacted Fire Station #1. Relocate or flood-protect Fire Station #1 Main Street	<ol style="list-style-type: none"> In Progress Lack of available funding and staff time. 	<ol style="list-style-type: none"> Include in the 2024 HMP The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at these critical facilities to protect against the 500-year flood level. Options include Elevation of the facility, Floodproofing of the facility, and Mobile flood barriers. Once the most cost-effective option is identified, the Town will carry out the option. N/A
Vestal Town-2	Protect the African Road Pump Station from the 500-year flood level	Flood	Facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level and raise electrical services.	<ol style="list-style-type: none"> In Progress. Lack of available funding and staff time. 	<ol style="list-style-type: none"> Include in the 2024 HMP The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at these critical facilities to protect against the 500-year flood level. Options include Elevation of the facility, Floodproofing of the facility, and Mobile flood barriers. Once the most cost-effective option is identified, the Town will carry out the option. N/A



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Vestal Town-3	Protect the Circle Drive Pump Station to the 500-year flood level	Flood	Facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level	<ol style="list-style-type: none"> 1. Completed 2. Electrical service raised to protect from flooding. 	<ol style="list-style-type: none"> 1. Discontinue 2. N/A 3. Completed.
Vestal Town-4	Protect the Myrtle Street Pump Station to the 500-year flood level	Flood	Facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level.	<ol style="list-style-type: none"> 1. No progress 2. Obstacles with time and capabilities. 	<ol style="list-style-type: none"> 1. Include in the 2024 HMP 2. The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at these critical facilities to protect against the 500-year flood level. Options include Elevation of the facility, Floodproofing of the facility, and Mobile flood barriers. Once the most cost-effective option is identified, the Town will carry out the option. 3. N/A
Vestal Town-5	Protect the Myrtle Street Pump Station to the 500-year flood level	Flood	Facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level	<ol style="list-style-type: none"> 1. Completed 2. No challenges. 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Repeated action.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Vestal Town-6	Protect the Stage Road Pump Station to the 500-year flood level	Flood	Facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level	<ol style="list-style-type: none"> 1. Completed 2. No challenges. 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Completed
Vestal Town-7	Protect the Third Avenue Pump Station to the 500-year flood level	Flood	Facilities manager	The Town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level	<ol style="list-style-type: none"> 1. In Progress 2. Obstacles with time and capabilities. 	<ol style="list-style-type: none"> 1. Include in the 2024 HMP. 2. The Town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level
Vestal Town-8	Protect the Vestal Volunteer EMS from the 500-year flood level	Flood,	Vestal Engineering; DEC	The Town will contact the facilities manager and discuss options for protecting the facility from the 500-year flood level	<ol style="list-style-type: none"> 1. Completed. 2. Vestal EMS relocated to the new facility in 2023. 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Completed.
Vestal Town-9	Protect the Glenwood Elementary School from the 500-year flood level	Flood	Village Floodplain Administrator	Move the Vestal EMS Emergency Squad building out of the Twin Orchards area (see below).	<ol style="list-style-type: none"> 1. No Progress. 2. N/A 	<ol style="list-style-type: none"> 1. Discontinue. 2. N/A 3. Glenwood School is not in a 500-year floodplain.



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Vestal Town-10	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	The Flood Damage Prevention Ordinance will be updated.	<ol style="list-style-type: none"> Completed Local Flood Plain Ordinance follows NY State Building Code 	<ol style="list-style-type: none"> Discontinue N/A Completed
Vestal Town-11	USACOE made an initial determination based on the Susquehanna River study that some areas of Town Floodwalls do not meet current freeboard criteria.	Flood	Floodplain Administrator	USACOE made an initial determination based on the Susquehanna River study that some areas of Town Floodwalls do not meet current freeboard criteria.	<ol style="list-style-type: none"> In Progress Met in Public meetings with USACOE, FEMA 	<ol style="list-style-type: none"> Include in the 2024 HMP Make upgrades to the existing floodwalls within the Town that do not meet the criteria as identified in the USACE study. N/A
Vestal Town-12	Continue gathering stormwater facility information	All	Town Engineering	Meet MS4 stormwater goals	<ol style="list-style-type: none"> In Progress New Regulations have increased the need to add additional information regarding all stormwater facilities within the Town 	<ol style="list-style-type: none"> Discontinue. N/A In Progress.



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
Vestal Town-13	Evaluate participation in the CRS.	Flood	Town Engineering	Evaluate participation benefits and costs and join if favorable.	<ol style="list-style-type: none"> No Progress Challenges with staff availability and training. 	<ol style="list-style-type: none"> Include in the 2024 HMP Explore the benefits of joining the CRS program and see if it is a feasible option for the Town. N/A
Vestal Town-14	Consider non-structural flood hazard mitigation alternatives for at-risk properties within the floodplain, including those that have been identified as repetitive loss.	Flood	Town Engineering	Consider non-structural flood hazard mitigation alternatives for at-risk properties within the floodplain, including those that have been identified as repetitive loss properties, such as acquisition/relocation, or elevation depending on feasibility. The parameters for the feasibility of this initiative would be: funding	<ol style="list-style-type: none"> No Progress Challenges with staff time and Town resources. 	<ol style="list-style-type: none"> Discontinue. N/A No longer an initiative for the Town. The Town does not have the capabilities to assist RLL property owners. The county will need to intervene.
Vestal Town-15	Relocated Vestal EMS.	Flood	Town Engineering	Relocated Vestal EMS.	<ol style="list-style-type: none"> Completed Vestal EMS is no longer in the floodplain nor subject to flooding 	<ol style="list-style-type: none"> Discontinue N/A Completed
Vestal Town-16	Relocate the Parks Department to the Highway	Flood	Town Engineering	Flooding of parks department lower facility.	<ol style="list-style-type: none"> Completed The Parks Department is no longer in floodplain nor subject to flooding 	<ol style="list-style-type: none"> Discontinue N/A Completed



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Department building					
Vestal Town-17	Build a permanent storm pump station at Roberts Street	Flood	Town Board	Convert out-of-service sewer station to storm water pump station (NY Rising 2014 Funds used as well)	1. In Progress 2. Plans are 90% completed. Challenges with construction funding.	1. Include in the 2024 HMP. 2. Build a permanent storm pump station near the flood walls at Roberts Street Pumphouse Road NYSDEC Flood Pond and Twin Orchards area. 3. N/A
Vestal Town-18	Build a dam and/or detention pond on Fuller Hollow Creek	Flood, Severe Storm	Town Board: NYSDEC	Build a dam and or detention pond on Fuller Hollow Creek. Stream restoration as part of downstream impact attenuation	1. No Progress. 2. No challenges.	3. Discontinue 4. N/A 5. The GOSR project through Broome Tioga Soli and Conservation addressed erosion along the lower section of Fuller Hollow Creek partially addressing the concern
Vestal Town-19	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program.	Floods, Severe Storms, Severe Winter Weather	Municipality	Participation in the NOAA "StormReady" program shall include providing information on the "StormReady" program, facilitating public outreach and awareness programs, and supporting community storm risk reduction activities as appropriate. Specific actions addressed by "StormReady" participation include establishing a 24-hour Warning Point, increasing the number of	1. Completed 2. No challenges	1. Discontinue 2. N/A 3. Completed



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				ways EOC receives NWS warnings, increasing the number of ways to disseminate warnings, monitoring hydrometeorological data, providing annual weather safety talks, training weather spotters, creating a formal hazardous weather plan, host annual visits by NWS to communities, etc.		
Vestal Town - 20	Mitigate flooding by purchasing adjacent property for flood mitigation/detention/storage/pumping facility.	Flood	Vestal Fire Department	Flooding of Vestal Fire Station #2. Protect Fire Station #2 from flash flooding and flooding	<ol style="list-style-type: none"> In Progress No challenges. 	<ol style="list-style-type: none"> Include in the 2024 HMP. The Town will secure funding to waterproof the basement area and utilities of the older portion of Fire Station #2 and carry out the improvements N/A



Proposed Hazard Mitigation Initiatives for the HMP Update

Vestal participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Vestal 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 the Town’s priorities.

Table 9.22-18 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. Table 9.22-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.22-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure		X		X	X					X
Disease Outbreak		X								X
Drought		X								X
Earthquake		X								X
Extreme Temperature		X								X
Flood		X	X	X	X	X		X	X	
Invasive and Nuisance Species		X								X
Severe Storm		X	X	X	X	X		X	X	
Severe Winter Storm		X								X
Wildfire		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 stormwater 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 9.22-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Med./ Low
2024-VestalT -01	Critical Facilities in Floodplain	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High
2024-VestalT -02	Upgrade Flood Walls	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High
2024-VestalT -03	Choconot Creek Stabilization	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High
2024-VestalT -04	Relocate Critical Facilities	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2024-VestalT -05	Permanent Storm Pump Station	1	1	1	1	0	0	1	1	1	1	1	1	1	1	12	High
2024-VestalT -06	Generators for Existing Pump Station	1	1	1	1	0	0	1	1	1	1	1	1	1	1	12	High
2024-VestalT -07	Culvert and Drainage Ditch Upgrades	1	1	1	1	0	0	1	1	1	1	1	1	1	1	12	High
2024-VestalT -08	Floodproof Fire Station #2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2024-VestalT -09	Town-wide Flood Warning System	1	1	1	1	1	0	0	0	1	1	1	1	1	1	11	High
2024-VestalT -10	PPE Acquisition/ Pandemic Response	1	0	1	1	1	1	1	0	1	1	0	1	1	1	11	High
2024-VestalT -11	Updates to the Emergency Operation Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2024-VestalT -12	Construction of Potable Water Well	1	1	1	1	0	0	1	1	1	1	1	1	1	1	12	High
2024-VestalT -13	Invasive Species Identification Training	1	1	1	1	0	1	1	1	1	1	1	1	1	1	12	High
2024-VestalT -14	Snow Storage Areas	1	1	1	1	0	0	0	1	1	1	1	1	1	1	12	High
2024-VestalT -15	CRS Program	1	1	1	1	1	0	1	1	1	1	1	1	1	1	12	High



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2024-VestalT -16	Privately Owned Critical Facilities in Floodplain	1	1	1	1	0	0	0	1	1	1	1	1	1	12	High
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Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).



Action 2024-VestalT-01. Critical Facilities in Floodplain

Action Name:	2024-VestalT-01 (prev. 1, 2, 4, and 7)	
Description of the Problem:	<p>The following critical facilities owned by the Town are located in the Floodplain:</p> <ul style="list-style-type: none"> - Vestal Company 1 - African Road Pump Station - Myrtle Street Pump Station - Midas Pump Sation - Valley Road Stormwater Pump Station - River Road Pump Station - Stage Road Pump Station - SycamOre Road Pump Station - Third Avenue Pump Station 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at these critical facilities to protect against the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> • Elevation of facility • Floodproofing of facility • Mobile flood-barriers <p>Once the most cost-effective option is identified, the Town will carry out the option.</p>	
Lead Agency:	Town Engineer	
Supporting Agencies:	N/A	
Estimated Cost:	TBD by feasibility assessment	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	
Implementation Timeline:	Short (< 5 years)	
Goals Met:	3	
Benefits:	Ensures continuity of operations for Superior Plus Energy Services on Old Vestal Road.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	
Impact on Critical Facilities/Lifelines:	This action will protect Superior Plus Energy Services which is a critical facility, maintaining the critical services that it provides.	
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.	
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events.	





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	This provides continued support to both current and future development in the service area.		
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists.
	Relocate facility		Not possible.
	Build a Levee around the facility		No space for a full levee system.





Action 2024-VestalT-02. Upgrade Flood Walls

Action Name:	2024-VestalT-02 (prev. 11)		
Description of the Problem:	A current USACE study has found that the Town’s flood walls do not meet the criteria.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Make upgrades to the existing floodwalls within the Town that do not meet the criteria as identified in the USACE study.		
Lead Agency:	Town Engineer		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	HMGP, PDM, FMA, Municipal Budget		
Implementation Timeline:	Long (> 5 years)		
Goals Met:	3		
Benefits:	Flood mitigation and less risk for flood wall failure.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Restoring floodwalls will protect communities at risk of flood impacts.		
Impact on Critical Facilities/Lifelines:	The floodwalls within the Town protect critical facilities and lifelines, such as critical roadways. Updating these structures will ensure the continuity of operation of these facilities.		
Impact of Capabilities:	Floodwalls ensure that first responders have access to communities and community members during a severe flood event.		
Impact on Future Development:	Flood walls will protect future development in the Town.		
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity by upgrading floodwalls to meet USACE criteria.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No actions.		Potential for floodwall failure.
	Remove floodwalls.		Problem persists.
	Construct new floodwalls and remove the old ones.		Costly, timely.





Action 2024-VestaIT-03. Choconot Creek Stabilization

Action Name:	2024-VestaIT-03		
Description of the Problem:	Choconot Creek: Erosion problem along the creek which threatens water, sewer, and roads.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will aim to reduce flood and erosion risk through the creek bank stabilization of Choconot Creek.		
Lead Agency:	Town Administration		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	HMGP, BRIC, Municipal Budget		
Implementation Timeline:	Long (> 5 years)		
Goals Met:	1		
Benefits:	Choconot Creek will be protected from erosion and increase flood protection for the surrounding community and facilities.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Vulnerable populations located near Choconot Creek will be protected from future flood events and erosion impacts.		
Impact on Critical Facilities/Lifelines:	Critical lifelines such as roadways, water, and sewer, will remain fully operational and the risk of erosion will decrease.		
Impact of Capabilities:	First responders will have access to communities and community members during hazard events.		
Impact on Future Development:	Stabilization of Choconot Creek will protect future development along the Creek bank area.		
Climate Change Considerations:	This action will protect the community from increased flooding and erosion impacts due to climate change influences.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Problem persists.
	Retreat from areas near Creek.		Costly, unpopular
	Levees along Creek.		Not feasible, environmentally damaging, and costly.





Action 2024-VestalT-04. Relocate Critical Facilities

Action Name:	2024-VestalT-04		
Description of the Problem:	There is extensive flooding to the Town Hall and Police Department Buildings.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will relocate these structures, as well as relocate the Parks Building to make room.		
Lead Agency:	Town Engineer		
Supporting Agencies:	Town Administrator		
Estimated Cost:	High (> \$500,000)		
Potential Funding Sources:	BRIC, HMGP, Municipal Budget		
Implementation Timeline:	Short (> 5 years)		
Goals Met:	1,3		
Benefits:	Relocation of these critical facilities will allow them to be operational during flooding and severe storm events.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	These critical facilities protect socially vulnerable populations during a hazard event. This action will ensure they are fully operational during flooding and severe storm events.		
Impact on Critical Facilities/Lifelines:	The Town Hall and Police Department Buildings are critical infrastructure and will be protected from flood events.		
Impact of Capabilities:	This action will ensure that these facilities remain fully operational during hazard events.		
Impact on Future Development:	These critical facilities will serve future development in the community.		
Climate Change Considerations:	This action will ensure that the Town Hall and Police Department Buildings are protected from future flooding concerns and impacts caused by climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	Do nothing.		Problem persists.
	Deployable floodwalls		Costly, short-term solution.
	Construct flood wall		Costly, timely.





Action 2024-VestalT-05. Permanent Storm Pump Station

Action Name:	2024-VestalT-05 (prev. 17)		
Description of the Problem:	Flood walls at Roberts Street, Pumphouse Road, NYSDEC Flood Pond, and Twin Orchards area are at risk.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Build a permanent storm pump station near the flood walls at Roberts Street Pumphouse Road NYSDEC Flood Pond and Mian Street.		
Lead Agency:	Town Engineer		
Supporting Agencies:	N/A		
Estimated Cost:	High (1,200,000+)		
Potential Funding Sources:	HMPG, BRIC, Annual Budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	1,3		
Benefits:	Reduced risk of flooding and resulting damage to facilities.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Vulnerable areas that may otherwise experience a loss of access to roadways during heavy rain or flooding will be more likely to retain services.		
Impact on Critical Facilities/Lifelines:	Hydration lifeline and roadway is more likely to remain intact.		
Impact of Capabilities:	Maintaining operational roadway services reduces recovery time and costs.		
Impact on Future Development:	Communities with sound and resilient infrastructure encourage commercial and residential development.		
Climate Change Considerations:	Consideration should be taken regarding the increase in heavy rain and flood events as a result of climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Upgrade floodwalls		Costly, timely.
	Relocate structures near floodwalls.		Costly, timely, unpopular





Action 2024-VestalT-06. Generators for Existing Pump Station

Action Name:	2024-VestalT-06	
Description of the Problem:	Need permanent generators for the existing storm pump station at Valley Road.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	Public Works will oversee the installation of a fixed-mounted diesel-powered generator and necessary electrical components to supply backup power to the pump station at Valley Road. Public Works will be responsible for the maintenance and testing of the generator following installation.	
Lead Agency:	Public Works	
Supporting Agencies:	N/A	
Estimated Cost:	Medium (\$10,000 > \$ \$500,000)	
Potential Funding Sources:	<i>HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Annual Budget</i>	
Implementation Timeline:	Short (< 5 years)	
Goals Met:	3	
Benefits:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures the continued operation of a critical facility and its essential functions during a power outage.	
Impact of Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Impact on Future Development:	This action results in the protection of a critical facility that could support future development.	
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	Problem persists
	Microgrid	Costly and difficult to implement
	Solar panels and battery backup	Solar power is unlikely to be able to provide battery power for extended power failure events.





Action 2024-VestalT-07. Culvert and Drainage Ditch Upgrades

Action Name:	2024-VestalT-07		
Description of the Problem:	Need crossover pipes and new ditches on country roads that have steep grades, to limit ditch distances.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town Engineering Department will be responsible for designing and implementing crossover pipes for culvert repair and drainage ditch improvements to allow for necessary increased stormwater capacity.		
Lead Agency:	Town Engineering Department		
Supporting Agencies:	N/A		
Estimated Cost:	Medium		
Potential Funding Sources:	HMGP, BRIC, CHIPS, operating budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	1, 3		
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.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Areas that were previously vulnerable to frequent or severe flooding events will be less likely to be impacted by flooding events.		
Impact on Critical Facilities/Lifelines:	Access to health and medical facilities will be maintained, both for healthcare workers and the population who require treatment for injuries and illnesses.		
Impact of Capabilities:	The action is likely to result in maintained access for first responders.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
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 a result of climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Remove roadway		The roadway cannot be removed.
	Raingardens		Rain gardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.





Action 2024-VestalT-08. Floodproof Fire Station #2

Action Name:	2024-VestalT-08 (prev. 20)		
Description of the Problem:	Fire Station #2 needs to be floodproofed.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will secure funding to waterproof the basement area and utilities of the older portion of Fire Station #2 and carry out the improvements.		
Lead Agency:	Town Fire Department		
Supporting Agencies:	Town Engineer		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	HMGP, BRIC, USDA Community Facilities Grant Program, Annual Budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	1, 3		
Benefits:	Critical services provided by Fire Station #2 will be protected from flooding.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for utility workers and emergency managers to stage and deploy resources to vulnerable and hazard-prone areas.		
Impact on Critical Facilities/Lifelines:	With a protected critical facility, communications are more likely to remain intact between responding agencies.		
Impact of Capabilities:	Ensuring continuity of operations allows for a more rapid return to normalcy after a hazard event.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow operations to adapt and resume in a more efficient manner.		
Climate Change Considerations:	Consideration should be taken for increases in flooding frequency and severity.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists
	Deploy temporary flood barriers.		Not feasible, short-term solution
	Relocate Fire Station #2		Not feasible, timely.





Action 2024-VestalT-09. Town-wide Flood Warning System

Action Name:	2024-VestalT-09	
Description of the Problem:	The existing levee system within the Town is vulnerable to rapid catastrophic failure associated with flooding, no simulations of rapid notification or evacuation have been exercised.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	Install an automated flood warning system. This will include sensors (rain, water level, weather) along the existing levee system in the Town. The sensors will report via radio to a central receiver at the EOC that will send data and warning information. As the river hits the various flood stages, the Town will release appropriate warnings to residents.	
Lead Agency:	Town Administration	
Supporting Agencies:	N/A	
Estimated Cost:	Low (< \$10,000)	
Potential Funding Sources:	HMGP, NWS, USGS, Annual Budget	
Implementation Timeline:	Short (< 5 years)	
Goals Met:	1, 3	
Benefits:	The community will be able to have access to alerts and warnings to be able to respond and be better protected from levee failure and flooding.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Providing increased warning time to vulnerable populations, such as those that have no means of transportation or require assistance to evacuate, is likely to increase their chances of survival during a flood event.	
Impact on Critical Facilities/Lifelines:	Monitoring river conditions as they occur provides invaluable time for first responders and emergency managers to know where best to stage resources and send personnel for evacuation or search and rescue operations.	
Impact of Capabilities:	Placing sensors ahead of a flood will allow for routine monitoring to occur outside of floods.	
Impact on Future Development:	Residences and businesses are more likely to remain in place with the knowledge that they will receive accurate and timely warnings of a flood before it occurs.	
Climate Change Considerations:	An updated analysis should be conducted to determine the best locations for sensors to be placed that will best identify flooding before it reaches population centers.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Problem persists
	Town staff to alert the community	Unreliable and not enough staff availability.
	Relocate residents	Not an option.





Action 2024-VestaT-10. Disease Outbreak Capabilities

Action Name:	2024-VestaT-10		
Description of the Problem:	The Town was vulnerable to the COVID-19 pandemic. Clear direction on all facets of local municipal operations and municipal responsibilities needs to be disseminated by the County and State hierarchy.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town staff will continue to research and pursue opportunities to increase the Town’s ability to respond to disease outbreak events.		
Lead Agency:	Town Administration		
Supporting Agencies:	N/A		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	BRIC, Town budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	3		
Benefits:	Increase disease outbreak capability.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Emergency response function throughout a disease outbreak will provide the opportunity to develop solutions for the vulnerable population, including the development of vaccination plans and providing personal protective equipment.		
Impact on Critical Facilities/Lifelines:	Critical facilities are more likely to remain open or have shortened shutdowns following disease outbreak exposures.		
Impact of Capabilities:	Continuity of operations will be assured for the health and medical lifeline, which can provide an opportunity for a faster return to normal operations post-event.		
Impact on Future Development:	Populations vulnerable to infection will be less likely to become ill, preserving the community structure and relieving economic insecurity as a result of the event.		
Climate Change Considerations:	N/A		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		Problem persists
	Hire an outside consultant to address disease outbreak events		High cost, may not be needed at all times
	Set up plans to work remotely during all disease outbreak events		Full remote setting not possible for critical services





Action 2024-VestalT-11. Updates to the Emergency Operation Plan

Action Name:	2024-VestalT-11	
Description of the Problem:	Revisions and updates are needed to the Town’s Emergency Operation Plan.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Town will update the Town Emergency Operation Plan to include current hazards of concern.	
Lead Agency:	Town Administration	
Supporting Agencies:	N/A	
Estimated Cost:	Low (< \$ 10,000)	
Potential Funding Sources:	Tetra Tech will address	
Implementation Timeline:	Short (< 5 years)	
Goals Met:	1, 3	
Benefits:	This action will enhance emergency operations in the Town to current hazards of concern.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	An updated Emergency Operation Plan will protect the community from current hazards of concern.	
Impact on Critical Facilities/Lifelines:	This action will protect critical facilities and ensure standards of operation are functional during hazard events.	
Impact of Capabilities:	This action will enhance emergency response in the Town.	
Impact on Future Development:	This action will protect future development during hazard events.	
Climate Change Considerations:	The updated emergency operation plan will consider climate change impacts when planning for emergency response strategies.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No action	Emergency operation plan out of date.
	Create a new EOP	Not feasible, not timely.
	Rely on non-profits for emergency response.	Not an option.





Action 2024-VestalT-12. Construction of Potable Water Well

Action Name:	2024-VestalT-12		
Description of the Problem:	Need for a new potable water source well.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will construct a potable water source well.		
Lead Agency:	Town Engineering Department		
Supporting Agencies:	N/A		
Estimated Cost:	High		
Potential Funding Sources:	<i>Tetra Tech will address</i>		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	1,2,7,8		
Benefits:	Less risk of interruption to potable water services.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will ensure socially vulnerable populations have access to potable water during hazard events.		
Impact on Critical Facilities/Lifelines:	This action will increase critical facility capacity and capabilities to serve the community during a hazard event.		
Impact of Capabilities:	The construction of a potable water well will increase the Town’s capacity to provide potable water services to the community during a hazard event.		
Impact on Future Development:	This action will serve future development and ensure these populations have access to potable water.		
Climate Change Considerations:	This action should consider the increase in frequency and severity of hazard events due to climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Relocate residents		Not feasible, timely, or unpopular.
	Rely on the Red Cross to supply potable water during disaster events.		Not an option.





Action 2024-VestalT-13. Invasive Species Identification Training

Action Name:	2024-VestalT-13		
Description of the Problem:	Not all staff in the field are cognitive in invasive species identification.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will train staff in the NYSDEC Invasive Species Comprehensive Management Plan.		
Lead Agency:	Town Administration		
Supporting Agencies:	N/A		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	Town Annual Budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	3		
Benefits:	Town staff will know how to implement the NYSDEC Invasive Species Comprehensive Management Plan.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	The NYSDEC Invasive Species Comprehensive Plan will be implemented in the Town and ensure all residents are safe from invasive species concerns.		
Impact on Critical Facilities/Lifelines:	This action will ensure the Town’s critical assets are not impacted by invasive species concerns.		
Impact of Capabilities:	This action will strengthen the Town’s staff capabilities to plan for and respond to invasive species.		
Impact on Future Development:	The NYSDEC Invasive Species Comprehensive Plan will serve and protect future development and habitat.		
Climate Change Considerations:	The NYSDEC Invasive Species Comprehensive Plan takes into consideration climate change when recommending planning and projects.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists.
	The Town will develop its own Invasive Species Comprehensive Plan.		Not feasible, lack of knowledge, timely.
	Rely on NYSDEC to handle all invasive species concerns in the Town.		Not an option.





Action 2024-VestalT-14. Snow Storage Areas

Action Name:	2024-VestalT-14		
Description of the Problem:	The Town does not have a place for snow cleared away from water bodies during severe storms even, except within the floodplain near Susquehanna River.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Create snow storage areas to allow for the dumping and storing of removed snow from areas adjacent to water bodies.		
Lead Agency:	Town Engineering Department		
Supporting Agencies:	Town Administration		
Estimated Cost:	Low (< \$10,000)		
Potential Funding Sources:	<i>Municipal Budget</i>		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	3		
Benefits:	Snow storage will allow for the excess snow removed from water bodies to be safely stowed away from residents.		
Mitigation Action Type: <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Snow storage will protect the community from snow-related impacts during a severe winter storm event.		
Impact on Critical Facilities/Lifelines:	This action will ensure critical facilities can operate during a severe storm event safely and efficiently.		
Impact of Capabilities:	This action will increase the Town’s capabilities and capacity to respond to severe winter storm events.		
Impact on Future Development:	Snow storage will serve and protect future development near the water bodies.		
Climate Change Considerations:	This action will take into consideration climate change impacts that will cause an increase in the severity and frequency of severe winter weather storms.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists
	Rely on surrounding residents to store excess snow.		Potentially hazardous, not an option.
	Dump excess snow into water bodies.		Environmentally hazardous, not an option.





Action 2024-VestalT-15. CRS Program

Action Name:	2024-VestalT-15 (prev. 13)		
Description of the Problem:	The Town is not participating in the CRS program.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Explore the benefits of joining the CRS program and see if it is a feasible option for the Town.		
Lead Agency:	Town Administration		
Supporting Agencies:	N/A		
Estimated Cost:	TBD		
Potential Funding Sources:	FEMA, Municipal Budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	1		
Benefits:	By joining the CRS program, the Town will have flood insurance rate benefits for residents as well as added flood protection.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	This action will provide flood insurance rate benefits and resources for residents within the Town.		
Impact on Critical Facilities/Lifelines:	This action will work to protect critical facilities and lifelines within the Town from flood and severe storm events.		
Impact of Capabilities:	Joining the CRS program will increase the flood mitigation capabilities of the Town.		
Impact on Future Development:	This action will protect future development from severe flood events and allow for flood insurance benefits on these structures.		
Climate Change Considerations:	This action considers climate change impacts to the severity and frequency of flooding and severe storm events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Problem persists.
	Explore other flood mitigation programs.		Not timely, not an option.
	Implement flood mitigation locally and not join the CRS program		No flood insurance benefits or federal resources.





Action 2024-VestalT-16. Privately Owned Critical Facilities in Floodplain

Action Name:	2024-VestalT-16		
Description of the Problem:	<p>The following critical facilities are privately owned and are located in the Floodplain:</p> <ul style="list-style-type: none"> - Vestal Mobile Home Park - Stewart Four Cities Trailer Park - Vestal Termina; (BETZL) 		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	<p>The Town will conduct outreach to the owners of the critical facilities to educate them on what additional floodproofing measures are needed at these critical facilities to protect against the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> • Elevation of facility • Floodproofing of facility • Mobile flood barriers. 		
Lead Agency:	Town Engineer		
Supporting Agencies:	N/A		
Estimated Cost:	TBD by feasibility assessment		
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget		
Implementation Timeline:	Short (< 5 years)		
Goals Met:	3		
Benefits:	Ensures continuity of operations for Superior Plus Energy Services on Old Vestal Road.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.		
Impact on Critical Facilities/Lifelines:	This action will protect Superior Plus Energy Services which is a critical facility, maintaining the critical services that it provides.		
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.		
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input checked="" type="checkbox"/> High





9.22. TOWN OF VESTAL

Alternatives	Action	Evaluation
	No action	Problem persists.
	Relocate facility	Not possible.
	Build a Levee around the facility.	No space for a full levee system.





Action 2024-VestalT-17. Socially Vulnerable Populations Outreach

Action Name:	2024-VestalT-17		
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	<i>Municipal Budget, HMGP</i>		
Implementation Timeline:	Short (< 3 years)		
Goals Met:	1, 2, 3		
Benefits:	This action will ensure an individual is working to identify and work with the socially vulnerable populations in the Village. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	N/A		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input checked="" type="checkbox"/> High
Alternatives	Action		Evaluation





9.22. TOWN OF VESTAL

	No action	Problem persists.
	Rely on state or federal resources.	
	Use only a few methods for distribution.	





SECTION 9.

9.23 VILLAGE OF WHITNEY POINT

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

9.23.1 Hazard Mitigation Planning Team

The Village of Whitney Point identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Village departments. The Water Department represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.23-1 summarizes Village officials who participated in the development of the annex and what capacity. Additional documentation of the Village’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.23-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Adam Wells, Water Dept Address: 2612 Liberty Street, Whitney Point, NY 13862 Phone Number: (607) 692-4021 Email: wdpdw@frontiernet.net	Name/Title: Linda Murphy, Clerk Address: 2612 Liberty Street, Whitney Point, NY 13862 Phone Number: 607-692-4907 Email: clerk@whitneypoint.org
NFIP Floodplain Administrator	
Name/Title: Mark See, Code Enforcement Officer Address: 2612 Liberty Street, Whitney Point, NY 13862 Phone Number: 607-692-4907 Email: code@whitneypoint.org	
Additional Contributors	
Name/Title: Adam Wells, Water Dept Method of Participation: Provided key input in the planning process	
Name/Title: Linda Murphy, Clerk Method of Participation: Provided key input in the planning process	
Name/Title: Mark See, Code Enforcement Officer Method of Participation: Provided key input in the planning process	





Primary Point of Contact	Alternate Point of Contact
Name/Title: Jason Somers, Mayor Method of Participation: Provided key input in the planning process and attended meetings	

9.23.2 Municipal Profile

The Village of Whitney Point is located within the Town of Triangle in Broome County, NY. The Town is on the confluence of the Tioughnioga River and Otselic River. It is on the junctions of Routes NY -11, NY-26, NY-79, NY-206, and Interstate Route 81. For more information on the Town of Triangle, refer to Section 9.20. The Village of Whitney Point has a total area of 1.1 square miles. Home rule is strong in New York State and thus, each town and village has its own governing body. The Village of Whitney Point is governed by a Mayor and four Trustees (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Village of Whitney Point was 960, a 0.4 percent decrease from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 3.3 percent of the population is 5 years of age or younger, 23 percent is 65 years of age or older, 0 percent is non-English speaking, 35.4 percent is below the poverty threshold, and 17.5 percent is considered disabled.

9.23.3 Jurisdictional Capability Assessment and Integration

The Village of Whitney Point 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an





opportunity for the Village of Whitney Point to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.23-2 summarizes the planning and regulatory tools that are available to the Village of Whitney Point. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.23-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations				
Building Code	Yes	March 3, 1982	State and Local	Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Village is currently investigating possible changes to the building code that would assist in making the structures in our village more resistant to damage caused by flooding and other possible natural hazards.				
Zoning/Land Use Code	Yes	January 4, 1995	Local	Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The current zoning ordinance discourages development in floodplains –but in cases where this is unavoidable, we provide a resource to the community to ensure that any structures are better suited to withstand the effects of a flood. This is of specific concern since a large portion of the village is in a floodplain. Given the possibility that new FEMA maps may be accepted that disregard the effectiveness of “uncertified” levies, even more of the village may fall within what the official “floodplain” if an arrangement cannot be made to financially assist the Village in this certification process.				
Subdivision Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Site Plan Code	Yes	1998	Local and County	Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Whenever the function of a parcel in the Village is slated to change, a Site Plan review is requested. This allows the Planning Committee/Village Board ample opportunity to ask the proper questions regarding hazard mitigation and ensure the proper precautions are taken.				
Stormwater Management Code	Yes	1997	Local	Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Working closely with our Department of Public Works to ensure that our storm sewers and streets are maintained properly and kept free of debris, we reduce the risk of additional damage in the event of a flooding event.				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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 the 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>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	1982, 1987	Federal, State, County, and Local	Codes
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The Flood Damage Prevention Ordinance limits the amount of development that occurs in the Village floodplain.				
Wellhead Protection	Yes	1998, 2001	Local	DPW
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Fences enclose the structures. The wells are capped and raised out of the flood zone to prevent contamination by floodwaters.				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Planning Documents				
General/Comprehensive Plan	Yes	Comprehensive Plan, July 25, 2012	Local	Planning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Since the Village of Whitney Point is only approximately a square mile in size and is at the confluence of two rivers, completely preventing development in a floodplain is not practical. Instead, the Village concentrates on intelligent development, encouraging proper precautions to minimize risk in the event of a disaster. The comprehensive plan emphasizes the desire for continued development in the Village. While the Village encourages development to occur in non-floodplain areas, the Village strives to provide resources to those who have no choice.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Stormwater Management Plan	Yes	Stormwater Management Plan	Local	Planning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Storm sewer is being actively maintained to minimize the risk of flooding from excessive stormwater. The planning committee weighs these questions when reviewing Site Plans.				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	Yes	2006, 2008	Local	Village Board, Planning Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan, 1993	Local or County	Planning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This plan outlines specific communication procedures and chain of command. It also defines possible hazard events, their priorities, and who is responsible for each - as well as follow-up actions.				
Continuity of Operations Plan	Yes	Emergency Operation Plan, 1993	Local or County	Planning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This plan outlines specific communication procedures and chain of command. It also defines possible hazard events, their priorities, and who is responsible for each - as well as follow-up actions.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.23-3 summarizes the capabilities of the Village of Whitney Point to oversee and track development.

Table 9.23-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Enforcement
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	The flood zone is tracked
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	100%

Administrative and Technical Capability

Table 9.23-4 summarizes potential staff and personnel resources available to the Village of Whitney Point and their current responsibilities that contribute to hazard mitigation.

Table 9.23-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Planning Board
Zoning Board of Adjustment	Yes	Volunteer Board to address requests for variances
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Volunteer
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Public Works/Highway Department	Yes	Currently, a staff of two maintains water/sewer transmission and Village roads.
Construction/Building/Code Enforcement Department	Yes	Monitors building permits and zoning applications
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	DPW
Mutual aid agreements	Yes	As per the County, for Fire Protection
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	Yes	Water Department
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	La Mont Engineers
Engineers or professionals trained in building or infrastructure construction practices	Yes	La Mont Engineers
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.	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Village Mayor
Grant writer(s)	No	-
Resilience Officer	No	-
Other (NFIP Floodplain Administrator (FPA))	Yes	Village Code Enforcement Officer
Administrative/technical capability self-assessment		
Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.		
With a small staff, administrative overhead is minimized. The Village strives to keep the staff well-trained in new technologies to assist their job functions and how they contribute to hazard mitigation.		



Fiscal Capability

Table 9.23-5 summarizes financial resources available to the Village of Whitney Point.

Table 9.23-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds.	Yes
Incur debt through special tax bonds.	Yes
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Yes - LWRP

Education and Outreach Capability

Table 9.23-6 summarizes the education and outreach resources available to the Village of Whitney Point.

Table 9.23-6. 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	Mayor
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	Facebook
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	SMS Messaging
Natural disaster/safety programs in place for schools	No	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.23-7 summarizes classifications for community programs available to the Village of Whitney Point.





Table 9.23-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.23-8 summarizes the adaptive capacity for each identified hazard of concern and the Village’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 9.23-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.23.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.23-1 is responsible for maintaining this information.





National Flood Insurance Program (NFIP) Summary

Table 9.23-9 summarizes the NFIP statistics for the Village of Whitney Point.

Table 9.23-9. Village of Whitney NFIP Summary of Policy and Claim Statistics

# Policies	4
# Claims (Losses)	3
Total Loss Payments	\$35,416
# Repetitive Loss Properties (NFIP definition)	1
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.23-10 provides a summary of the NFIP program in the Village of Whitney Point.

Table 9.23-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Prior to the installation of the dam and flood control levies, the majority of the village was prone to flooding. However, since the levees were installed, the effects of flooding have been minimal.
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	None
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Procedures need to be developed.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Unclear, since we have been unaffected by recent flood events in our jurisdiction





NFIP Topic	Comments
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigation properties, how were the projects funded? 	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	That depends on which maps you look at - the "current maps" are accurate, but the ones in consideration that will disregard the status of the levees if not properly certified by the municipality are completely inaccurate.
NFIP Compliance	
What local department is responsible for floodplain management?	Our Code Enforcement Officer has historically been our Floodplain Manager
Are any certified floodplain managers on staff in your jurisdiction?	No - we have just had some turnover and are looking to fill this position
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Yes – The Village has minimal staff, and turnover often means starting at square one. The Village would love to see some training. A county "advisor" would also help be a more reliable source of information and consistency since local personnel can often change
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Turnover in staff
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	Code regulations
What are the barriers to running an effective NFIP program in the community, if any?	turnover/changes in officials and staffing lead to a loss of information
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Has not happened since 2021
What is the local law number or municipal code of your flood damage prevention ordinance?	FDPO 1982
What is the date that your flood damage prevention ordinance was last amended?	1987
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Meets
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Code enforcement officer ensures that any work done in the flood plain meets requirements. In the event of new construction, our Planning Board makes these determinations - and flood risk is considered when work is done within the flood plain



NFIP Topic	Comments
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	This may be required if the proposed flood maps are passed.

9.23.5 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 9.23-11 through

Table 9.23-13.

Table 9.23-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2020				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2021				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2022				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2023				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A

SFHA Special Flood Hazard Area (1% flood event)

Table 9.23-12. Recent Major Development and Infrastructure from 2018 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
None Identified					

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





Table 9.23-13. 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
MC Whitney Point LLC (Byrne Dairy)	Commercial	1	2862 NYS Route 11, Whitney Point, NY 13862	Wildfire Interface, NEHRP Soil Hazard Area	Anticipated within 5 years

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

9.23.6 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 Village of Whitney Point’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

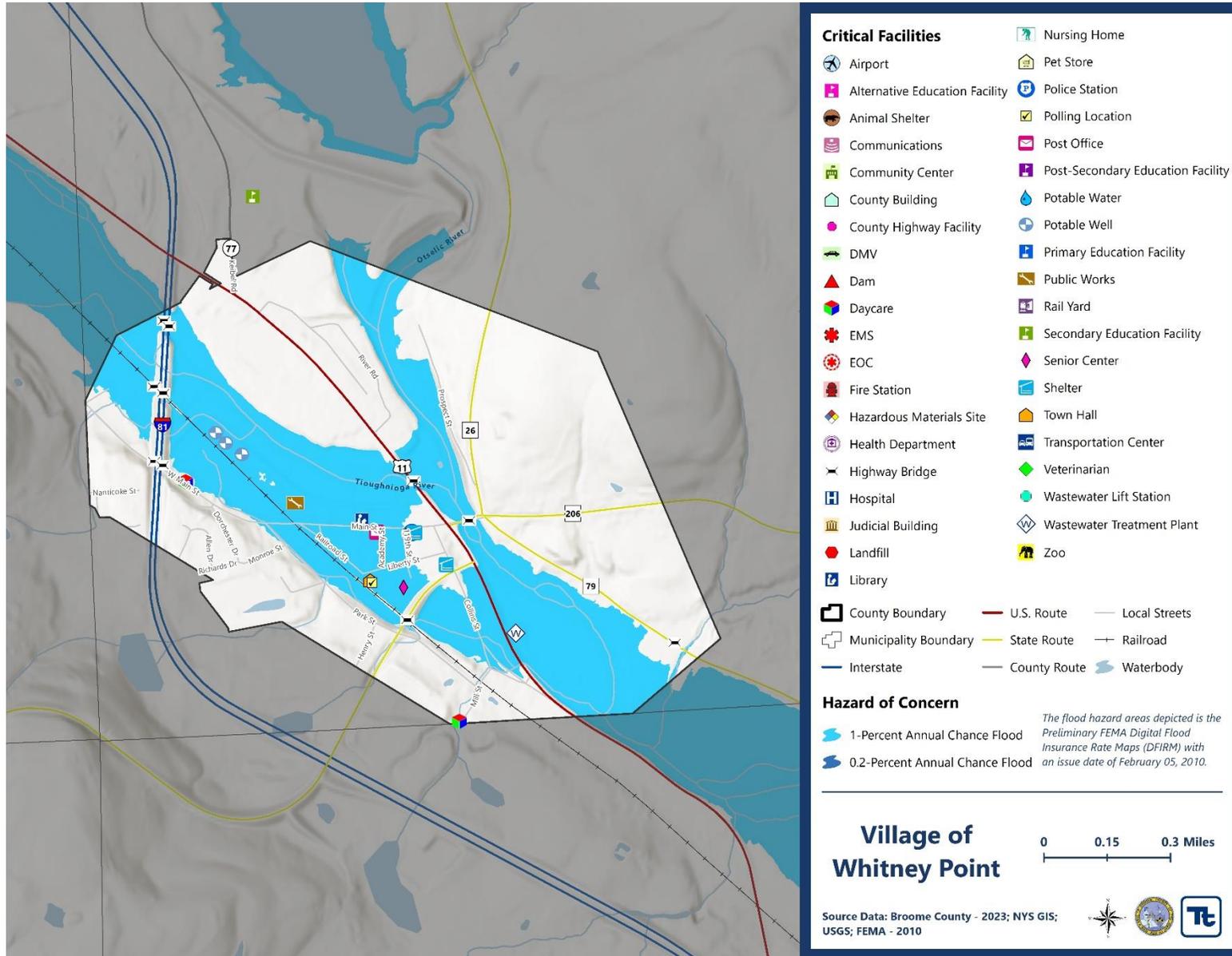
Hazard area maps provided below illustrate the probable hazard areas impacted within the Village are shown in Figure 9.23-1 through Figure 9.23-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Whitney Point has significant exposure. The maps show the location of potential new development, where available.





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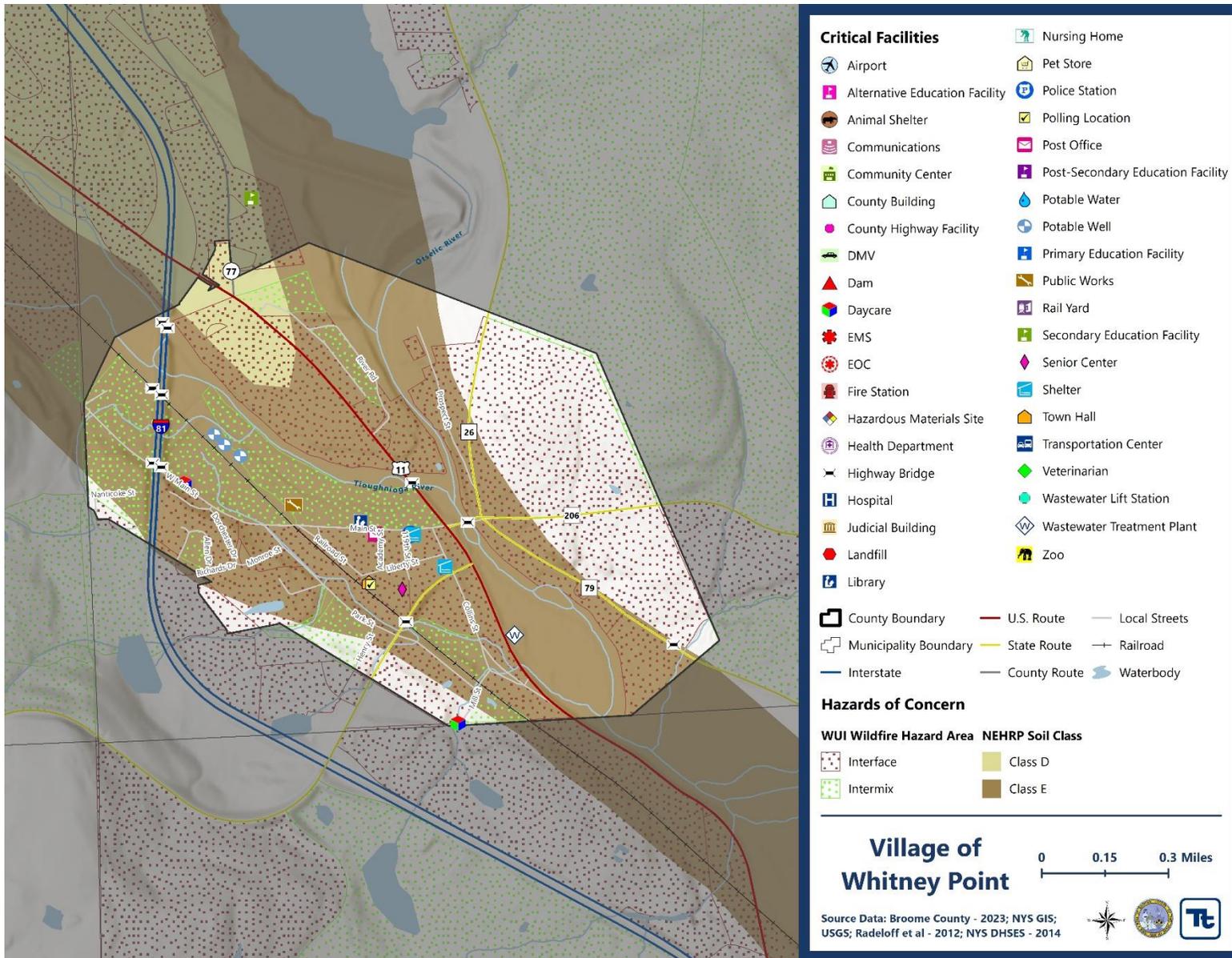
Figure 9.23-1. Village of Whitney Point Flood Hazard Area Extent and Location Map





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Figure 9.23-2. Village of Whitney Point NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Village of Whitney Point is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.23-14 provides details on loss and damage in the Village during hazard events since the last hazard mitigation plan update.

Table 9.23-14. Hazard Event History in the Village of Whitney Point

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	The Village has not experienced any additional notable damages or losses.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Village has not experienced any additional notable damages or losses.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Village has not experienced any additional notable damages or losses.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	The Village has not experienced any additional notable damages or losses.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Village of Whitney Point.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Whitney Point 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 Village indicated the following:

- The Village agreed with all of the hazard rankings.

Table 9.23-15 shows Whitney Point’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.23-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	High
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.23-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.23-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
WELL PW-1	Potable Well	X	X	2024-Whitney PointV-04	-
WELL PW-2	Potable Well	X	X	2024-Whitney PointV-04	-
WELL PW-3	Potable Well	X	X	2024-Whitney PointV-04	-
Village of Whitney Point	Public Works	X	X	2024-Whitney PointV-04	-
Northern Broome Senior Center	Senior Center	X	X	2024-Whitney PointV-04	-





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Mary Wilcox Memorial Library	Library	X	X	2024-Whitney PointV-04	-
Triangle Town Hall	Town Hall	X	X	2024-Whitney PointV-04	-
Whitney Point Post Office	Post Office	X	X	2024-Whitney PointV-04	-
Bridge_1008320	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1018600	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1031261	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1031271	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1031272	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Village of Whitney Point WWTP	Wastewater Treatment Plant	X	X	2024-Whitney PointV-04	-

Source: Broome County 2023, Hazus V6

Identified Issues

After a review of the Village of Whitney Point’s hazard event history, hazard rankings, hazard location, and current capabilities, the Village of Whitney Point identified the following vulnerabilities within their community:

- The protection and status of the levee located within the Village limits is unknown, partially due to out-of-date FEMA maps.
- The Village is experiencing chronic flooding at Prospect Street, Collins Street, West Main Street, and Park Street, and the root cause of the flooding has not been identified, nor have any solutions been identified.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Village is currently not a member of the StormReady program.
- There are critical facilities in the Village which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery. The following critical facilities are municipally owned and located in the special flood hazard area:
 - PW-1 Well
 - PW-2 Well
 - PW-3 Well
 - Village DPW
 - North Broome Senior Center
 - Mary Wilcox Memorial Library
 - Triangle Town Hall





- Whitney Point Post Office
- Whitney Point WWT Plant
- The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plans to provide a framework for conducting such inspections and determinations.
- The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*

9.23.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.23-17 indicates progress on the Village’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 9.23-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
V. Whitney Point-1	Evaluate the level of protection of the levee and maintenance/repair procedures.	Flood	USACE & NYSDEC with Village Board & WPDPW as support	The protection and status of the levee is unknown. The protection and status of the levee is unknown.	1. In Progress 2. Lack of funding and staffing	1. Include 2. Waiting on FEMA map updates
V. Whitney Point-2	Work with regulatory agencies to address chronic flooding conditions at the following locations: Prospect Street, Collins Street, West Main St, Park St.	Flood	WPDPW	Chronic flooding takes place at the following locations: Prospect Street, Collins Street, West Main St, and Park St.	1. No Progress 2. Lack of funding	1. Include 2. Chronic flooding takes place at the following locations: Prospect Street, Collins Street, West Main St, and Park St.
V. Whitney Point-3 (Formerly Severe storm -1)	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.	Severe Storm	Municipality with support from the County, NYSOEM, and FEMA	"StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education, and awareness.	1. No Progress 2. Lack of staffing	1. Include 2. "StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education, and awareness.
V. Whitney Point-4	Protect the Well PW-1 to the 500-year flood level	Flood	Facility manager, Village	The Well is located in the 100-year floodplain	1. No Progress 2. Lack of funding	1. Include 2. The Well PW-1 is a critical facility located in the floodplain
V. Whitney Point-5	Protect the Well PW-2 to the 500-year flood level	Flood	Facility manager, Village	The Well is located in the 100-year floodplain	1. No Progress 2. Lack of funding	1. Include 2. The Well PW-2 is a critical facility located in the floodplain



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
V. Whitney Point-6	Protect the Well PW-3 to the 500-year flood level	Flood	Facility manager, Village	The Well is located in the 100-year floodplain	1. No Progress 2. Lack of funding	1. Include 2. The Well PW-3 is a critical facility located in the floodplain
V. Whitney Point-7	Protect the Village of Whitney Point DPW from the 500-year flood level	Flood	Village DPW	The DPW is located in the 100-year floodplain	1. No Progress 2. Lack of funding	1. Include 2. The Village of Whitney Point DPW is a critical facility located in the floodplain
V. Whitney Point-8	Protect the North Broome Senior Center from the 500-year flood level	Flood	Facility manager, Town	The Senior Center is located in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.	1. No Progress 2. Lack of funding	1. Include 2. The North Broome Senior Center is a critical facility located in the floodplain
V. Whitney Point-9	Protect the Mary Wilcox Memorial Library from the 500-year flood level	Flood	Library, Village	The Library is located in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.	1. No Progress 2. Lack of funding	1. Include 2. The Mary Wilcox Memorial Library is a critical facility located in the floodplain
V. Whitney Point-10	Protect the Triangle Town Hall from the 500-year flood level	Flood	Town of Triangle, Village Library, Village	The Town Hall is located in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.	1. No Progress 2. Lack of funding	1. Include 2. The Triangle Town Hall is a critical facility located in the floodplain
		Flood		The Post Office is located in the 100-	1. No Progress 2. Lack of funding	1. Include



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Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
V. Whitney Point-11	Protect the Whitney Point Post Office from the 500-year flood level		Town of Triangle, Village	year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.		2. The Whitney Point Post Office is a critical facility located in the floodplain
V. Whitney Point-12	Protect the Whitney Point WWT Plant to the 500-year flood level	Flood	Village DPW	The DPW is located in the 100-year floodplain and is currently protected to the 100-year flood level.	1. No Progress 2. Lack of funding	1. Include 2. The Whitney Point WWT Plant is a critical facility located in the floodplain



Proposed Hazard Mitigation Initiatives for the HMP Update

Whitney Point participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Whitney Point 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 the Village’s priorities.

Table 9.23-18 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. Table 9.23-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.23-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	-	-	X	X	X	X	-	-	-
Disease Outbreak	-	-	-	X	-	-	X	-	-	-
Drought	X	-	-	X	X	-	X	-	-	-
Earthquake	X	-	-	X	X	-	X	-	-	-
Extreme Temperature	X	-	-	X	X	-	X	-	-	-
Flood	X	X	X	X	X	X	X		X	X
Invasive and Nuisance Species	-	-	-	X	-	-	X	-	-	-
Severe Storm	X	X	X	X	X	X	X	-	X	X
Severe Winter Storm	X	X	X	X	X	X	X	-	X	X
Wildfire	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 stormwater 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 9.23-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2024-Whitney PointV-01	Levee Evaluation	1	1	1	1	1	1	0	1	1	1	1	1	0	0	11	High
2024-Whitney PointV-02	Flood Study	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2024-Whitney PointV-03	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
2024-Whitney PointV-04	Critical Facilities in the Floodplain	1	1	1	1	1	0	0	1	1	0	1	1	1	0	10	Medium
2024-Whitney PointV-05	Substantial Damage Response Plan	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
2024-Whitney PointV-06	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High

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



Action 2024-Whitney PointV-01. Levee Evaluation

Action Name:	Levee Evaluation		
Description of the Problem:	The protection and status of the levee located within the Village limits is unknown, partially due to out-of-date FEMA maps. This makes it difficult for the Village to determine the need and scale of potential mitigation projects to protect residents and property from dam/levee failure and flooding.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Village will conduct a study on the levee to evaluate the level of protection of the levee as well as the maintenance and repair procedures. The Village will also increase efforts in obtaining FEMA map updates to capture the status of the levee.		
Lead Agency:	Public Works, Village Administration		
Supporting Agencies:	FEMA		
Estimated Cost:	TBD		
Potential Funding Sources:	HMGP, BRIC, FMA, County Budget, Village Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	The Village will have better knowledge of the status of the levee located within the Village limits.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be located close to the inundation area of the levee and may be unaware of the proximity issues.		
Impact on Critical Facilities/Lifelines:	Critical facilities could be negatively impacted by the levee failure.		
Impact of Capabilities:	This action will increase the Village’s capability to protect the levee.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides additional protection for the levee.		
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





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	No Action.	-
	Construct a levee wall.	May be unnecessary and not cost-effective.
	Rely on the County.	The County may be unaware of levee issues.





Action 2024-Whitney PointV-02. Flood Study

Action Name:	Flood Study	
Description of the Problem:	The Village is experiencing chronic flooding at Prospect Street, Collins Street, West Main Street, and Park Street and the root cause of the flooding has not been identified, nor have any solutions been identified.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will conduct a flood study and will begin working with the United States Army Corps of Engineers (USACE) to identify problem locations and potential mitigation actions to reduce the occurrence of flooding and flood risk when floods do occur. Once identified, cost-effective actions will be carried out.	
Lead Agency:	Army Corps of Engineers (USACE)	
Supporting Agencies:	Broome County DEC	
Estimated Cost:	TBD after Study	
Potential Funding Sources:	HMGP, BRIC, FMA, NYSDEC, Broome County, Annual Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1	
Benefits:	<ul style="list-style-type: none"> Flood risk will be reduced in hazard-prone areas. Vulnerable communities will be identified ahead of a flood event, which will allow first responders to plan and stage resources in those areas. Future mitigation projects may be identified that will further increase overall community resiliency to flooding and other hazard events. 	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	<ul style="list-style-type: none"> Areas vulnerable to flooding will be made aware to Village leadership and first responders which can emphasize controlled future development. If cost-effective mitigation actions are identified, they may be implemented in flood-prone areas that could reduce their overall risk of loss of life and property. 	
Impact on Critical Facilities/Lifelines:	<ul style="list-style-type: none"> Transportation routes will be more likely to remain open if flooding is mitigated along them. 	



	<ul style="list-style-type: none"> Hydration systems may remain potable for community usage if projects are identified to protect the existing infrastructure from flooding. 		
Impact of Capabilities:	Improves the Village’s capabilities to handle floods.		
Impact on Future Development:	Flood insurance costs may decrease.		
Climate Change Considerations:	Consideration should be taken to ensure any projects conducted have accounted for increased extreme rainfall events.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		-
	Upsizing Storm Drains.		The Village is not aware of proper storm drain sizes that will mitigate the flood hazard.
	Elevating roads and critical facilities/lifelines to prevent flooding.		There may be more cost-effective solutions that can be identified through a flood study.



Action 2024-Whitney PointV-03. StormReady Program Participation

Action Name:	StormReady Program Participation	
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning in relation to floods, severe storms, severe winter storms, and extreme temperature events. The Village is currently not a member of the StormReady program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will coordinate with the local NWS office to complete all necessary requirements to become a StormReady community to better prepare the Village to deal with floods, severe storms, severe winter storms, and extreme temperatures.	
Lead Agency:	Village Administration	
Supporting Agencies:	Floodplain Administrator	
Estimated Cost:	Staff Time	
Potential Funding Sources:	<i>Municipal Budget</i>	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 2,3	
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.	
Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.	
Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and 	





	<p>issue timely and effective warnings ahead of severe weather events.</p> <ul style="list-style-type: none"> StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 		
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.		
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action.		-
	Increase warning system capabilities without StormReady guidance.		No CRS points would be available. Less public awareness and support from NWS.
	Hire a third party to conduct emergency warning system improvements.		Costly. No CRS points would be available. Less public awareness and support from NWS.



Action 2024-Whitney PointV-04. Critical Facilities in the Floodplain

Action Name:	Action 2024-Whitney PointV-04. Critical Facilities in the Floodplain	
Description of the Problem:	<p>There are critical facilities in the Village which are located in the floodplain. Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery. The following critical facilities are municipally owned and located in the special flood hazard area:</p> <ul style="list-style-type: none"> • PW-1 Well • PW-2 Well • PW-3 Well • Village DPW • North Broome Senior Center • Mary Wilcox Memorial Library • Triangle Town Hall • Whitney Point Post Office • Whitney Point WWT Plant 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>The Village will conduct a feasibility assessment to determine what additional floodproofing measures are needed at Well PW-1, Well PW-2, Well PW-3, Village DPW, North Broome Senior Center, Mary Wilcox Memorial Library, Triangle Town Hall, Whitney Point Post Office, and Whitney Point WWT Plant to protect each to the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> • Elevation of facility • Floodproofing of facility • Mobile flood-barriers <p>Once the most cost-effective option is identified, the Village will carry out the option.</p>	
Lead Agency:	Public Works, Town of Triangle Administration	
Supporting Agencies:	Floodplain Administrator, Facility Owners	
Estimated Cost:	TBD	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget, Village Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1	
Benefits:	Ensures continuity of operations	
Mitigation Action Type:	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP)





Check all that apply		<input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	
Impact on Critical Facilities/Lifelines:	This action will protect the critical facilities located in the floodplain which will, maintain the critical services that they provide.	
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.	
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.	
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.	
Priority: <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action.	-
	Relocate facility.	Relocation is expensive and results in the loss or delay of critical services in the immediate area.
	Establish plans to enter into an MOU with neighboring critical facilities to provide service during flood events.	Reduction in response times and delay of critical services in the immediate area.



Action 2024-Whitney PointV-05. Substantial Damage Response Plan

Action Name:	Substantial Damage Plan	
Description of the Problem:	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"> • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for “market value” and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure’s pre-damage value. • Require permits for floodplain development. <p>The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plans to provide a framework for conducting such inspections and determinations.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	<p>The municipality will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>	
Lead Agency:	Public Works	
Supporting Agencies:	Floodplain Administrator	
Estimated Cost:	Staff Time	
Potential Funding Sources:	<i>Municipal Budget</i>	
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan.	
Goals Met:	1	
Benefits:	This plan will provide a process for making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.	
Mitigation Action Type:	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)



Check all that apply		
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliant with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.	
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.	
Impact of Capabilities:	This action improves disaster recovery capabilities.	
Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future developments in the municipality.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides additional planning for disaster recovery.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action.	-
	Rely on state or federal resources following disaster events.	Resources may not be available during major widespread events.
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations.	A plan outlining responsibility is still necessary to prevent missing important requirements.



Action 2024-Whitney PointV-06. Socially Vulnerable Populations Outreach

Action Name:	Action 2024-Whitney PointV-06.	
Description of the Problem:	The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Village will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website.	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Village Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Village. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Village will become educated on hazards and risks. The Village will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.	
Impact on Critical Facilities/Lifelines:	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.	



Impact of Capabilities:	This action would build upon the Village’s already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action.		Current methods remain the only ones used.
	Rely on state or federal resources.		Resources may be generalized and not specific to the risks in the Village.
	Use only a few methods for distribution.		Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.



SECTION 9.

9.24 TOWN OF WINDSOR

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Town of Windsor with reducing losses from future hazard events. This annex is not guidance on 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 Town of Windsor, describes who participated in the planning process, assesses the Town’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.24.1 Hazard Mitigation Planning Team

The Town of Windsor identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Town departments. The Town Supervisor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.24-1 summarizes Town officials who participated in the development of the annex and what capacity. Additional documentation of the Town’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.24-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Mark Odell, Town Supervisor Address: 124 Main Street Windsor, NY 13865 Phone Number: 607-206-4558 Email: supervisor.tow@gmail.com	Name/Title: Elizabeth Pfister, Town Clerk Address: 124 Main Street Windsor, NY 13865 Phone Number: 607-655-5440 Email: windsortc1@echoes.net
NFIP Floodplain Administrator	
Name/Title: Shelly Bennett, Lead Planner Address: 124 Main Street Windsor, NY 13865 Phone Number: 607-655-2023 Email: shelly.johnson@co.delaware.ny.us	
Additional Contributors	
Name/Title: Mark Odell, Town Supervisor Method of Participation: Provided key input in the planning process	
Name/Title: Elizabeth Pfister, Town Clerk Method of Participation: Provided key input in the planning process and attended meetings	
Name/Title: Shelly Bennett, Lead Planner Method of Participation: Provided key input in the planning process	





Primary Point of Contact	Alternate Point of Contact
Name/Title: Craig Terrell, Windsor Fire Chief Method of Participation: Provided key input in the planning process	
Name/Title: Dan Griffiths, Town Engineer Method of Participation: Provided key input in the planning process	
Name/Title: Jerry Launt, Fire Chief Method of Participation: Provided key input in the planning process	
Name/Title: Michael Kithcart, Highway Superintendent Method of Participation: Provided key input in the planning process	
Name/Title: Richard Osborne, Code Enforcement Officer Method of Participation: Provided key input in the planning process	

9.24.2 Municipal Profile

The Town of Windsor is located on the south border of Broome County, NY, and is the largest town in the county. The Town of Windsor has a total area of 92.8 square miles. The Town is bordered by Sanford to the east, Colesville to the north, and Kirkwood to the west. The south town line is the border with Pennsylvania. The Susquehanna River flows southward through the town and New York State Route 17/I-86 crosses the town from east to west. The Town includes the hamlets of Blatchley, Cascade Valley, Damascus, Dunbar, East Windsor, Edson, Flowers, Occanum, South Windsor, State Line, and West Windsor. The Village of Windsor is also located in the Town of Windsor. For more information on the Village of Windsor, refer to Section 9.25. Home rule is strong in New York State and thus, each town and village has its own governing body. The Town of Windsor is governed by a Supervisor and four Town Council members (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Town of Windsor was 4,897, an 8.6 percent decrease from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 9.2 percent of the population is 5 years of age or younger, 20.5 percent is 65 years of age or older, 0 percent is non-English speaking, 9.4 percent is below the poverty threshold, and 14.6 percent is considered disabled.

9.24.3 Jurisdictional Capability Assessment and Integration

The Town of Windsor 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Town of Windsor to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

Table 9.24-2 summarizes the regulatory tools that are available to the Town of Windsor. *The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.*

Table 9.24-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Town Code Chapter 53	State and Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This local law provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in the Town of Windsor. This local law is adopted pursuant to section 10 of the Municipal Home Rule Law. Except as otherwise provided in the Uniform Code, other state law, or other sections of this local law, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this local law.				
Zoning/Land Use Code	Yes	Town Code Chapter 93	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This chapter has been established to encourage the most appropriate use of land and protect and conserve the value of property; promote the health, safety, morals, and general welfare of the community; regulate the location, use, and occupancy of buildings and the use of land for trade, industry, residence, and other uses; to regulate and limit the height and bulk of buildings and other structures; to regulate and determine the area of yard and other open spaces; to regulate the density of population; and for said purpose to divide the town into districts; to provide for its administration and enforcement; and to prescribe penalties for the violation of its provisions.				
Subdivision Code	Yes	Town Code Chapter 79	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> It is the policy of the Town to consider land subdivisions as part of a plan for the orderly, efficient, and economical development of the town. Land to be subdivided shall be of such character that it can be used for building purposes without danger to health or peril from fire, flood, drainage, or other menace to neighboring properties or the public health, safety, and welfare.				
Site Plan Code	Yes	Town Code Chapters 53 & 79	Local and County	Town Board
<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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<p>Site Plans, which must be signed and sealed by a New York State Licensed Professional Engineer, shall be submitted, in such form as shall be approved from time to time by the Town Board to the Code Enforcement Officer. The Code Enforcement Officer shall transmit such site plans to the Planning Board within fifteen (15) days of receipt. The Code Enforcement Officer should indicate to the Planning Board if the plan follows the existing zoning regulations. The Code Enforcement Officer may make recommendations regarding the proposal.</p>				
Stormwater Management Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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>				
<p>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.</p>				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	Yes	Chapter 47	Local	Town Administration
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>The purpose of the Town of Windsor Environmental Quality Review Law is to incorporate the consideration of environmental factors into the planning and decision-making processes of the Town of Windsor. In adopting the Town of Windsor Environmental Quality Review Law, it is the intent of the Town of Windsor that all agencies operating within the stewards of air, water, land, and living resources, and that they have an obligation to protect the environment for the use and enjoyment of this and all future generations.</p>				
Flood Damage Prevention Ordinance	Yes	Town Code Chapter 51	Federal, State, County, and Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<p>It is the purpose of this chapter to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to :</p> <ul style="list-style-type: none"> A. Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or flood heights or velocities. B. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction. C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters. D. Control filling, grading, dredging, and other development which may increase erosion or flood damage. E. Regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands. F. Qualify for and maintain participation in the National Flood Insurance Program. 				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	State-mandated BFE+2 for all construction, both residential and non-residential	State, Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Enforcing all development to be above the floodplain alleviates future flooding.				
Other: Special Purpose Ordinances [i.e., sensitive areas, steep slope]	Yes	Town Code Chapter 68 Noise Control Town Code Chapter 43 Prohibiting the Deposit and/or Tracking of Certain Materials onto Town Highways and Streets	Local or County	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This alleviates unnecessary noise to residents and keeps roadways clear of foreign debris for traveling.				
Planning Documents				
General/Comprehensive Plan	Yes	2015 Amendment to September 2006 Comprehensive Plan	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Plan addresses how the Town is projected to grow and change about land use.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	Yes	Floodplain Management / Basin Plan	Local or Watershed	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> Enforcing buildings above the floodplain alleviates future flooding of properties.				
Stormwater Management 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Comprehensive Emergency Management Plan	Yes	Disaster Emergency Preparedness Plan updated 5/2018	Local or County	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The plan aims to prevent or minimize hazards to life and health and to mitigate damage to property caused by a disaster. Prevention refers to those short or long-term activities which eliminate, or reduce the number of occurrences of disasters. Mitigation refers to all activities which reduce the effects of disasters when they do occur.				
Continuity of Operations Plan	Yes	Disaster Emergency Preparedness Plan updated May 2018	Local or County	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This plan utilizes all available resources so that operations can be remedied quickly.				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	Disaster Emergency Preparedness Plan updated May 2018	Local	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This plan helps to prioritize repairs and complete them as quickly as possible.				
Public Health Plan	Yes	NYS Public Employer Health Emergency Plan, April 14, 2021	State	Town Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> In the event of a future health emergency, there is no protocol in place for key employees to work remotely and for residents to continue to do business with the Town.				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				

Development and Permitting Capability

Table 9.24-3 summarizes the capabilities of the Town of Windsor to oversee and track development.

Table 9.24-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Enforcement





Indicate if your jurisdiction implements the following	Yes/No	Comment:
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Flood Zone
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	85%

Administrative and Technical Capability

Table 9.24-4 summarizes potential staff and personnel resources available to the Town of Windsor and their current responsibilities that contribute to hazard mitigation.

Table 9.24-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Planning Board is responsible for monitoring the Town’s growth.
Zoning Board of Adjustment	Yes	Zoning and Code Enforcement are a joint department that issues permits and collects permit fees.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Board Committee
Public Works/Highway Department	Yes	-
Construction/Building/Code Enforcement Department	Yes	Zoning and Code Enforcement are a joint department that issues permits and collects permit fees.
Emergency Management/Public Safety Department	Yes	The Town Board acts as an emergency management department.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Highway Department
Mutual aid agreements	Yes	Highway and Sewer
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	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Supervisor/Town Board, Engineer/Planning Board
Engineers or professionals trained in building or infrastructure construction practices	Yes	Code Enforcement Officer & Engineer





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planners or engineers with an understanding of natural hazards	Yes	Code Enforcement Officer/Engineer/Planning Board
Staff with expertise or training in benefit/cost analysis	Yes	Supervisor
Professionals trained in conducting damage assessments.	Yes	Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Supervisor & Town Board
Grant writer(s)	Yes	Supervisor & Grant Writer <i>Consider the following:</i> Are data and maps from the HMP used to support documentation in grant applications?
Resilience Officer	No	-
Other (NFIP Floodplain Administrator FPA))	Yes	Code Enforcement Officer
Administrative/technical capability self-assessment		
Describe how your administrative/technical capabilities contribute to integration with the HMP and risk reduction in your community.		
Having these people in key positions is an asset to the Town because of their expertise in their field they have the knowledge to help Town officials make educated, informed decisions.		

Fiscal Capability

Table 9.24-5 summarizes financial resources available to the Town of Windsor.

Table 9.24-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	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.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No





Education and Outreach Capability

Table 9.24-6 summarizes the education and outreach resources available to the Town of Windsor.

Table 9.24-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	Yes	NY Alert and Windsor Weather links
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	NY Alerts
Natural disaster/safety programs in place for schools	Yes	School District develops a plan
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.24-7 summarizes classifications for community programs available to the Town of Windsor.

Table 9.24-7. 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.24-8 summarizes the adaptive capacity for each identified hazard of concern and the Town’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 9.24-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.24.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.24-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.24-9 summarizes the NFIP statistics for the Town of Windsor.

Table 9.24-9. Town of Windsor NFIP Summary of Policy and Claim Statistics

# Policies	17
# Claims (Losses)	54
Total Loss Payments	\$1,380,155
# Repetitive Loss Properties (NFIP definition)	8
# Repetitive Loss Properties (FMA definition)	2
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics are current as of October 2023.





Flood Vulnerability Summary

Table 9.24-10 provides a summary of the NFIP program in the Town of Windsor.

Table 9.24-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	The Town experiences consistent flooding along Columbia, Hoadley Hill, East Windsor, and Dutchtown Roads. The flooding impacts the structural integrity of the buildings and also compromises infrastructure located near or along these roadways.
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Based on a monetary percentage
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	Yes
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	permit review, inspections, education & outreach
How do you determine if the proposed development of an existing structure would qualify as a substantial improvement?	Percentage of assessed value
What are the barriers to running an effective NFIP program in the community, if any?	None





NFIP Topic	Comments
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	N/A
What is the local law number or municipal code of your flood damage prevention ordinance?	Town Code Chapter 51
What is the date that your flood damage prevention ordinance was last amended?	May 5, 2010
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

9.24.5 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 9.24-11 through Table 9.24-13.

Table 9.24-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	7	N/A	N/A	N/A
Permits within SFHA	0	N/A	N/A	N/A
2020				
Total Permits	10	N/A	N/A	N/A
Permits within SFHA	0	N/A	N/A	N/A
2021				
Total Permits	9	N/A	N/A	N/A
Permits within SFHA	0	N/A	N/A	N/A
2022				
Total Permits	5	N/A	N/A	N/A
Permits within SFHA	0	N/A	N/A	N/A
2023				
Total Permits	5	N/A	N/A	N/A





	New Construction Permits Issued			Total
	Single-Family	Multi-Family	Other (commercial, mixed-use, etc.)	
Permits within SFHA	0	N/A	N/A	N/A

SFHA Special Flood Hazard Area (1% flood event)

Table 9.24-12. Recent Major Development and Infrastructure from 2018 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
Old Route 17 Slope Stability Project	Completed	None	Old Route 17	Wildfire Intermix	Completed

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

Table 9.24-13. 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
Old Rte 17 Culvert Replacement	Construction in Progress	None	Old Rte 17 and Tuscarora Creek	1% and 0.2% Flood Hazard Area	Construction in Progress

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

9.24.6 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 Town of Windsor’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

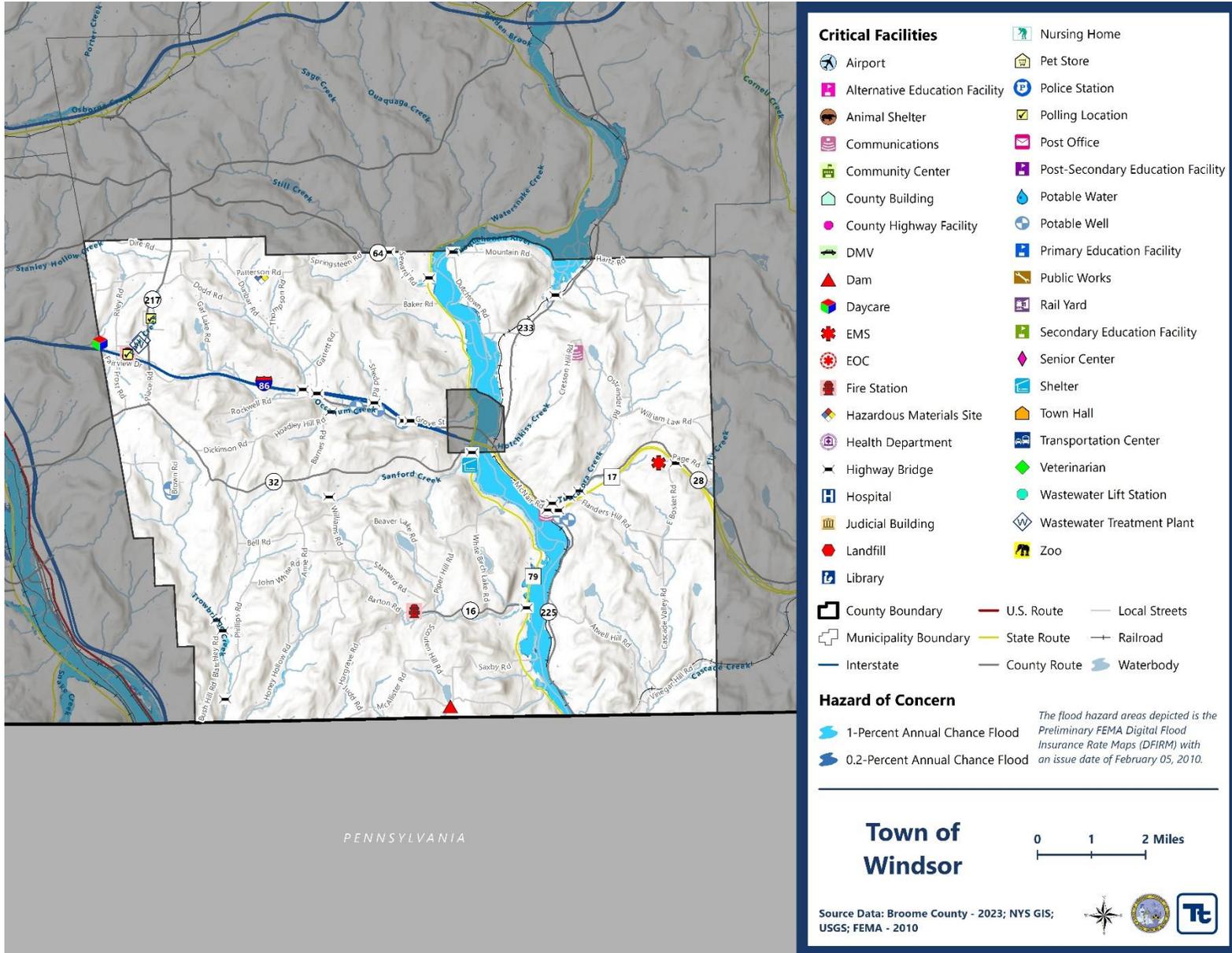
Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 9.24-1 through Figure 9.24-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which Windsor has significant exposure. The maps show the location of potential new development, where available.





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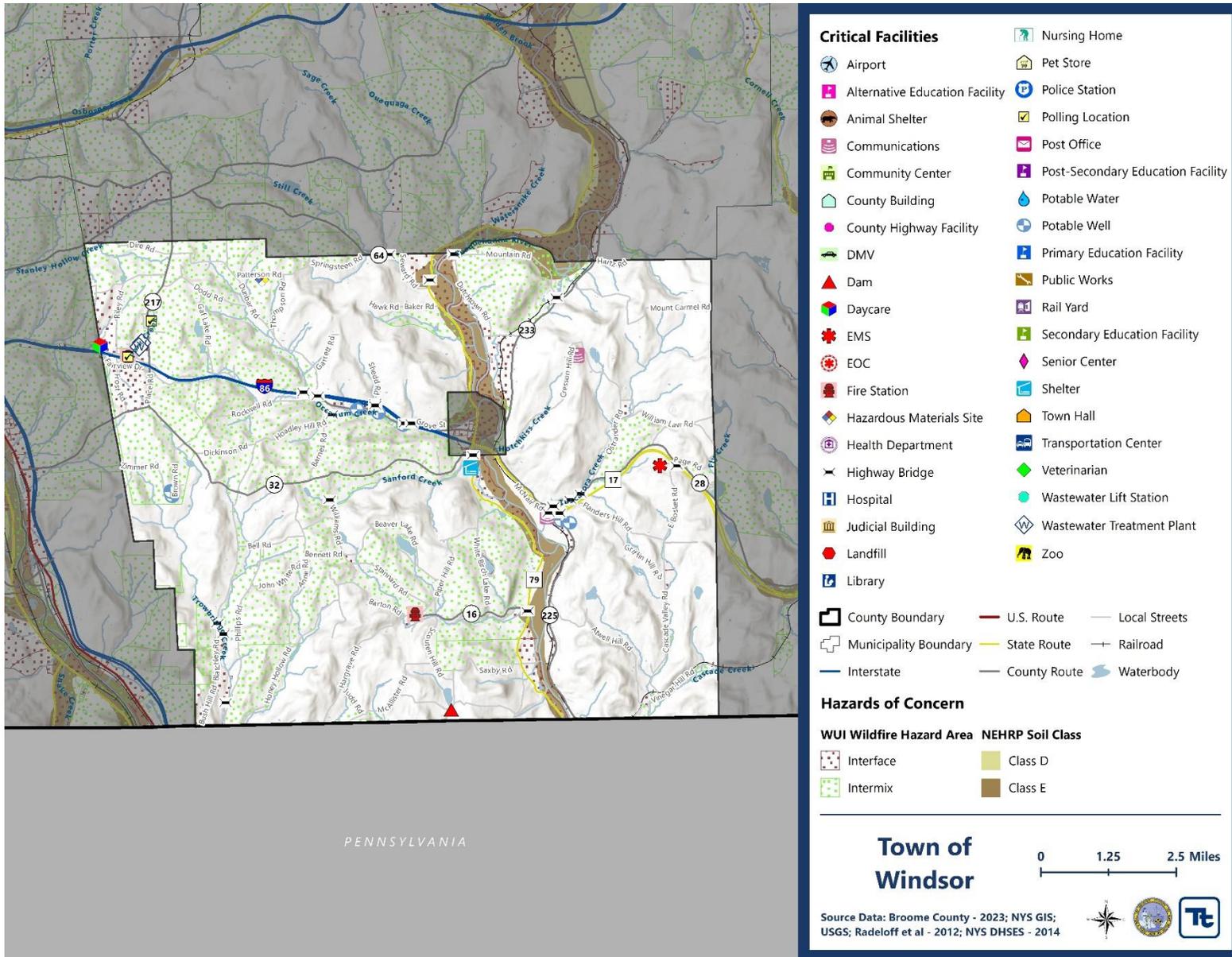
Figure 9.24-1. Town of Windsor Flood Hazard Area Extent and Location Map





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Figure 9.24-2. Town of Windsor NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Town of Windsor is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.24-14 provides details on loss and damage in the Town during hazard events since the last hazard mitigation plan update.

Table 9.24-14. Hazard Event History in the Town of Windsor

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Town
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	The Town did not have any documented damages or losses.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Town did not have any documented damages or losses.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Town did not have any documented damages or losses.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	Some Town residents were without power for three days.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Town of Windsor.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Windsor 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 Town indicated the following:

- The Town agreed with all of the hazard rankings.

Table 9.24-15 shows Windsor’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.24-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.24-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.24-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_1013221	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_1030420	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_2226020	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_2226050	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.
Bridge_2226110	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.



Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_3349310	Highway Bridge	X	X	-	The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

Identified Issues

After review of the Town of Windsor’s hazard event history, hazard rankings, hazard location, and current capabilities, the Town of Windsor identified the following vulnerabilities within their community:

- The Town Highway Department facility, located at 174 Chapel Street, does not have backup power to run the facility in the event of a power outage. When there is a power outage, the building and staff have limited resources to fully function, which can impact the services the department can provide to its residents and may restrict the type of response that can be provided during emergencies. With backup power, this facility can serve as a PPE distribution center and a shelter.
- Cell phone reception within the Town is spotty, which poses a risk to communication between Town Departments and the County when discussing hazard-related issues. This also poses a risk to socially vulnerable populations, who may rely on cell connections to translate information.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.
- The current flood insurance rate maps from FEMA are out of date and need to be updated to reflect the current standings of the Town.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has eight repetitive loss properties, but other properties may be impacted by flooding as well.
- The Town experiences consistent flooding along Columbia, Hoadley Hill, East Windsor, and Dutchtown Roads. The flooding impacts the structural integrity of the buildings and also compromises infrastructure located near or along these roadways.
- The Town has stands of dead or diseased trees, presenting a risk of falling branches and trees on infrastructure and private property. Falling trees or branches could result in injuries, death, closed roadways, plugging of culverts/bridges, and damage to overhead utilities. The Town's Highway Department continues to remove trees but estimates some high-hazard trees remain that are outside of the Department's capabilities due to their size or being outside of the Right-of-Way.
- The status of the Town's bridges and culverts to withstand hazard events is unknown. Failure of bridges or culverts could result in loss of life, damage to infrastructure, and limitations to emergency access.
- The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*





9.24.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.24-17 indicates progress on the Town’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 9.24-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Windsor-1	Reconstruction and restoration of stream bank in the Blatchley Road area	Flood, Severe Storm	Town Board, DPW	The stream bank has deteriorated. As the bank collapses, it erodes towards Blatchley Road and puts a home at risk of damage.	1. Completed	1. Discontinue
T. Windsor-2	Backup Power for the Highway Department facility	All	Highway Superintendent with support from Town Board	The Town Highway Department facility, located at 174 Chapel St., does not have backup power to run the facility in the event of a power outage. It serves as office space for Highway Department staff and storage for municipal vehicles. When there is a power outage, the building and staff have limited resources to fully function. This can impact the services the Department provides to its residents and may restrict the type of response they can provide during emergencies. A generator is needed to power the entire facility and allow continuity of operations for the Highway Department.	1. In Progress	1. Include
T. Windsor-3	Communication system upgrades	All	Town Board, DPW	The Town communication system for emergency responders and public works is not functional in several areas, causing reliance on spotty cell phone reception and landlines.	1. Completed	1. Discontinue
T. Windsor-4	Cell towers for expansion of cell phone coverage	All	Town Board, local cell phone providers	Cell phone reception within the Town is spotty. This poses a risk to communication when the Town communications system is not functional.	1. In Progress	1. Include



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
T. Windsor-5	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.	Severe Storm	Municipality with support from the County, NYSOEM and FEMA	"StormReady" communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education, and awareness.	1. No Progress	1. Include



Proposed Hazard Mitigation Initiatives for the HMP Update

Windsor participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Windsor 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 the Town’s priorities.

Table 9.24-18 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. Table 9.24-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.24-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Action That Addresses the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	-	X	-	X	-	-	-	-	-	X
Disease Outbreak	-	X	-	X	-	-	-	-	-	X
Drought	-	X	-	X	-	-	-	-	-	X
Earthquake	-	X	-	X	-	-	-	-	-	X
Extreme Temperature	-	X	-	X	-	-	-	-	-	X
Flood	X	X	X	X	X	X	X	X	X	X
Invasive and Nuisance Species	X	X	X	X	X	X	X	X	-	X
Severe Storm	X	X	X	X	X	X	X	X	X	X
Severe Winter Storm	X	X	X	X	X	X	X	X	X	X
Wildfire	X	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 stormwater 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 9.24-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-WindsorT-01	Highway Department Backup Power	1	1	1	1	1	0	0	1	1	1	1	1	1	0	11	High
Action 2024-WindsorT-02	Cell Towers	1	0	1	1	1	1	1	0	1	1	1	1	0	1	11	High
Action 2024-WindsorT-03	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Action 2024-WindsorT-04	Flood Insurance Rate Maps	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
Action 2024-WindsorT-05	Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
Action 2024-WindsorT-06	Flood Prone Area Outreach	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
Action 2024-WindsorT-07	Mitigation of Diseased and Dead Trees	1	1	1	1	1	1	0	1	1	1	1	1	0	1	11	High
Action 2024-WindsorT-08	Town Wide Bridge and Culvert Assessment	1	0	1	1	1	1	1	1	1	1	1	1	1	1	13	High
Action 2024-WindsorT-09	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High

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



Action 2024-WindsorT-01. Highway Department Backup Power

Action Name:	Highway Department Backup Power		
Description of the Problem:	The Town Highway Department facility, located at 174 Chapel Street, does not have backup power to run the facility in the event of a power outage. When there is a power outage, the building and staff have limited resources to fully function, which can impact the services the department can provide to its residents and may restrict the type of response that can be provided during emergencies. With backup power, this facility can serve as a PPE distribution center and a shelter.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct a generator study to determine the right-sized generator needed at the highway department. Once the right-sized generator is determined, the Town will acquire funding for the purchase and installation of the generator. The Town will also conduct routine maintenance on the generator.		
Lead Agency:	Highway Department		
Supporting Agencies:	Town Administrator		
Estimated Cost:	\$100,000		
Potential Funding Sources:	HMGP, BRIC, Generator Grant		
Implementation Timeline:	Within 5 years; maintenance is ongoing		
Goals Met:	1		
Benefits:	The generator will ensure that the highway department can perform continuity of operations.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Some socially vulnerable populations may need additional support from the highway department and may need to use the facility as a shelter if they are homeless.		
Impact on Critical Facilities/Lifelines:	The highway department is a critical facility and the generator ensures the continuity of operations may be fulfilled, even during power outages.		
Impact of Capabilities:	This increases the Town’s critical facility capabilities during power outages.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides additional support for critical facilities during power outages.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-





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	Rely on County facilities during outages	The current facility could not be used as a shelter during a power outage
	Purchase a portable generator	The generator may not be able to provide the entire building power





Action 2024-WindsorT-02. Cell Towers

Action Name:	Cell Towers		
Description of the Problem:	Cell phone reception within the Town is spotty, which poses a risk to communication between Town Departments and the County when discussing hazard-related issues. This also poses a risk to socially vulnerable populations, who may rely on cell connections to translate information. Cell service could be jeopardized and be out of service due to direct or indirect impacts, such as physical damage or understaffing and worker health/safety exposure concerns, respectively, from dam/levee failure disease outbreak, drought, earthquake, extreme temperature, invasive and nuisance species, severe storm, severe winter storm, and wildfire.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct a study to determine how many cell towers are needed and where they are needed at. The Town will acquire the funding to purchase and install additional cell towers and will perform routine maintenance on them.		
Lead Agency:	Town Board		
Supporting Agencies:	Highway Department, Broome County		
Estimated Cost:	TBD		
Potential Funding Sources:	HMGP, BRIC, Municipal Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	The addition of cell towers will ensure stronger communication across the Town to discuss and implement hazard mitigation principles.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Some socially vulnerable populations may rely on a cellular device to translate important information, and others may rely on that device as a warning system.		
Impact on Critical Facilities/Lifelines:	Critical facilities will be able to more quickly communicate with each other to prepare for hazard events.		
Impact of Capabilities:	This will strengthen the Town's communication capabilities.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is increasing the frequency and intensity of precipitation events that may warrant more immediate warnings where cellular devices would be most useful.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on radio		Some radio signals are hard to hear
	Rely on email		Email is a slower way of communication and may not be extremely useful in an emergency situation.





Action 2024-WindsorT-03. StormReady Program Participation

Action Name:	StormReady Program Participation		
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Town is currently not a member of the StormReady program.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will coordinate with the local NWS office to complete all necessary requirements to become a StormReady community.		
Lead Agency:	Town Board		
Supporting Agencies:	Town Committee, FEMA		
Estimated Cost:	Staff Time		
Potential Funding Sources:	<i>Municipal Budget</i>		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" 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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.		
Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.		
Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and issue timely and effective warnings ahead of severe weather events. StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 		
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.		
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action	-
	Increase warning system capabilities without StormReady guidance	No CRS points would be available. Less public awareness and support from NWS.
	Hire a third party to conduct emergency warning system improvements	Costly. No CRS points would be available. Less public awareness and support from NWS.



Action 2024-WindsorT-04. Flood Insurance Rate Maps

Action Name:	Flood Insurance Rate Maps	
Description of the Problem:	The current flood insurance rate maps from FEMA are out of date and need to be updated to reflect the current standings of the Town.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Town will apply for new insurance rate maps from FEMA that reflect how the Town is now.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Town Board	
Estimated Cost:	Staff Time	
Potential Funding Sources:	<i>Municipal Budget</i>	
Implementation Timeline:	Within 5 years	
Goals Met:	1	
Benefits:	The updated flood maps will better reflect the status of the Town boundaries.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be located in areas that are prone to flooding that the old maps do not show. Obtaining new maps allows the Town to complete additional outreach.	
Impact on Critical Facilities/Lifelines:	Some critical facilities/lifelines may be impacted by floodwaters that the older maps do not showcase.	
Impact of Capabilities:	This action improves the Town’s capabilities by providing maps that are more current and showcase the current problems.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is increasing the frequency and intensity of precipitation events that may lead to additional flooding.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
		<input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	-
	Contract for a new map for just the Town	Not done by FEMA and cannot be used in conjunction with FEMA regulations
	Create a GIS team to update the mapping used by the Town	Not cost-effective for flood maps





Action 2024-WindsorT-05. Repetitive Loss Properties

Action Name:	Repetitive Loss Properties		
Description of the Problem:	Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Town has eight repetitive loss properties, but other properties may be impacted by flooding as well.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Conduct outreach to 10 flood-prone property owners, including RL/SRL property owners, 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).		
Lead Agency:	Floodplain Administrator		
Supporting Agencies:	Broome County, FEMA		
Estimated Cost:	Staff Time		
Potential Funding Sources:	HMGP, BRIC, FMA, Broome County, Annual Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 5		
Benefits:	Eliminates flood damage to homes and residences, creating an open space for the municipality and increasing flood storage.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
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 Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
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.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





Alternatives	Action	Evaluation
	No Action	-
	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 2024-WindsorT-06. Flood Prone Area Outreach

Action Name:	Flood Prone Area Outreach		
Description of the Problem:	The Town experiences consistent flooding along Columbia, Hoadley Hill, East Windsor, and Dutchtown Roads. The flooding impacts the structural integrity of the buildings and also compromises infrastructure located near or along these roadways.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will conduct outreach to property owners along Columbia, Hoadley Hill, East Windsor, and Dutchtown Roads and will provide information on mitigation alternatives. After the most cost-effective mitigation measure is identified, the Town will help the property owners develop a FEMA grant application and BCA to obtain funding for the potential acquisition/purchase/moving/elevating of a structure.		
Lead Agency:	Floodplain Administrator		
Supporting Agencies:	Broome County, FEMA		
Estimated Cost:	Staff Time		
Potential Funding Sources:	<i>Municipal Budget</i>		
Implementation Timeline:	Ongoing		
Goals Met:	1, 2, 5		
Benefits:	The Town will experience reduced flooding along properties that participate in a mitigation measure.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
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 Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
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.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action	-
	Levee around flooded properties	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 2024-WindsorT-07. Mitigation of Diseased and Dead Trees

Action Name:	Mitigation of Diseased and Dead Trees		
Description of the Problem:	The Town has stands of dead or diseased trees, presenting a risk of falling branches and trees on infrastructure and private property. Falling trees or branches could result in injuries, death, closed roadways, plugging of culverts/bridges, and damage to overhead utilities. The Town's Highway Department continues to remove trees but estimates some high-hazard trees remain that are outside of the Department's capabilities due to their size or being outside of the Right-of-Way.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will explore options for the trimming and removal of high-hazard trees that have been damaged or killed by disease and will establish a long-term maintenance program that will be able to remove high-hazard trees as they come up. The first phase of the project after the program is established, will involve the survey of trees in the Town to determine which trees have been impacted by disease, invasive species, excessive precipitation and wind, and wildfire events. The Town will then work to remove trees by partnering with outside agencies such as utility providers and/or hiring contractors to remove the high-hazard trees. The Town will also research Municipal Law to determine if removing trees outside the R.O.W. is within their legal bounds.		
Lead Agency:	Highway Department		
Supporting Agencies:	Town Board		
Estimated Cost:	\$50,000		
Potential Funding Sources:	HMGP, BRIC, Town Budget		
Implementation Timeline:	Within 5 years, Ongoing		
Goals Met:	1, 2, 3, 4, 5, 6		
Benefits:	Reduction in damages or injuries from falling trees.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input 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: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	Critical facilities may be impacted by disease-ridden and dead trees.		
Impact of Capabilities:	This action improves the Town's capabilities to protect residents and properties that could be impacted by falling trees.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change is leading to an increase in more intense storms with stronger winds that have the ability to knock down trees.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No Action	-
	Rely on the County	The county is not responsible for town-owned property and areas.
	Rely on State and National forests.	State and National forests are not responsible for Town-owned areas.



Action 2024-WindsorT-08. Town Wide Bridge and Culvert Assessment

Action Name:	Town Wide Bridge and Culvert Assessment		
Description of the Problem:	The status of the Town's bridges and culverts in relation to withstand hazard events is unknown. Failure of bridges or culverts could result in loss of life, damage to infrastructure, and limitations to emergency access.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The Town will perform a Town-wide bridge and culvert assessment on an annual basis. The assessments will be well documented on applicable inspection forms. After the assessment, the Town will prioritize the repair, retrofit, or replacement of each structure. High-priority structures will then be analyzed based on project cost, schedule, and available funding sources.		
Lead Agency:	Town Engineer, Highway Department		
Supporting Agencies:	Town Board		
Estimated Cost:	Staff Time		
Potential Funding Sources:	HMGP, BRIC Grants, NYSDOT Grants, Municipal Budget		
Implementation Timeline:	Within 5 years and ongoing after the implemented		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	Infrastructure will be better protected from flood events and will ensure structural integrity.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	Bridges are used to access critical facilities within the Towns and culverts are used to reduce flooding from critical facilities.		
Impact of Capabilities:	This action increases the capabilities of the Town to ensure structural integrity.		
Impact on Future Development:	N/A		
Climate Change Considerations:	New or rehabilitated structures will be designed to handle increased stormwater discharge and/or velocities that can be attributed to climate change.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Leave the responsibility to the County.		Not all bridges and culverts are county-owned
	Elevate and upgrade all bridges and culverts		Not all bridges and culverts may need to be upgraded and elevated





Action 2024-WindsorT-09. Socially Vulnerable Populations Outreach

Action Name:	Action 2024-WindsorT-08. Socially Vulnerable Populations Outreach		
Description of the Problem:	The Town does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Town. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The Town will improve public awareness of hazards, prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Town website.		
Lead Agency:	Town Administration		
Supporting Agencies:	Broome County		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget, HMGP		
Implementation Timeline:	Within 3 years		
Goals Met:	1, 2, 3		
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Town. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Town will become educated on hazards and risks. The Town will identify an individual to identify and work with these populations to ensure the most up-to-date information is being shared.		
Impact on Critical Facilities/Lifelines:	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.		
Impact of Capabilities:	This action would build upon the Town’s already existing public education and outreach program.		
Impact on Future Development:	Not applicable		
Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation





	No action	Current methods remain the only ones used.
	Rely on state or federal resources.	Resources may be generalized and not specific to the risks in the Town.
	Use only a few methods for distribution.	Using only a few methods of distribution may hinder socially vulnerable populations from receiving guidance.



SECTION 9.

9.25 VILLAGE OF WINDSOR

This jurisdictional annex to the Broome County Hazard Mitigation Plan (HMP) provides information to assist the public and private sectors in the Village of Windsor with reducing losses from future hazard events. This annex is not guidance on 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 Village of Windsor, describes who participated in the planning process, assesses the Village’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.25.1 Hazard Mitigation Planning Team

The Village of Windsor identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Village departments. The Mayor represented the community on the Broome County HMP Planning Partnership 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 by reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Table 9.25-1 summarizes Village officials who participated in the development of the annex and what capacity. Additional documentation of the Village’s planning activities through Planning Partnership meetings is included in Volume 1.

Table 9.25-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Ron Harting, Mayor Address: 107 Main Street, Windsor, NY 13865 Phone Number: 607-655-2024 Email: Office@villageofwindsor.org	Name/Title: Courtney Decker, Office Clerk Address: 107 Main Street, Windsor, NY 13865 Phone Number: 607-655-2024 Email: Office@villageofwindsor.org
NFIP Floodplain Administrator	
Name/Title: Richard Osborne, Zoning and Code Enforcement Administrators Address: 107 Main Street, Windsor, NY 13865 Phone Number: (607) 655-3118 Email: Office@villageofwindsor.org	
Additional Contributors	
Name/Title: David Decker/Public Works Superintendent Method of Participation: Provided key input and support in the planning process and attended meetings	
Name/Title: Richard Osborne, Zoning and Code Enforcement Administrators Method of Participation: Provided key input and support in the planning process	
Name/Title: Ron Harting, Mayor Method of Participation: Provided key input and support in the planning process	





Primary Point of Contact	Alternate Point of Contact
Name/Title: Courtney Decker, Office Clerk	
Method of Participation: Provided key input and support in the planning process	

9.25.2 Municipal Profile

The Village of Windsor is located within the Town of Windsor in Broome County, NY. The Village is situated in the middle of the town and is the principal settlement. For more information on the Town of Windsor, refer to Section 9.24. The Village of Windsor has a total area of 1.2 square miles (Tetra Tech 2019). According to the U.S. Census, the 2020 population for the Village of Windsor was 907, a 1 percent decrease from the 2010 Census.

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 several 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 2020 U.S. Census indicates that 3.1 percent of the population is 5 years of age or younger, 23.9 percent is 65 years of age or older, 0.2 percent is non-English speaking, 12 percent is below the poverty threshold, and 16.5 percent is considered disabled.

9.25.3 Jurisdictional Capability Assessment and Integration

The Village of Windsor 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 /or policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The development of an updated mitigation strategy provided an opportunity for the Village of Windsor to identify opportunities for the integration of mitigation concepts that can be incorporated into municipal procedures.





Planning, Legal, and Regulatory Capability and Integration

Table 9.25-2 summarizes the planning and regulatory tools that are available to the Village of Windsor. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.

Table 9.25-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 86-120 requires 2 feet freeboard, October 2015	State and Local	Building
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Village Board of Trustees of the Village of Windsor finds that public nuisances exist in the Village of Windsor in the operation of certain commercial establishments and the use or alteration of residential and commercial property in flagrant violation of the building code, zoning regulations, health laws, penal laws regulating obscenity, prostitution and related conduct, gambling, controlled substances, and dangerous drugs, possession of stolen property and licensing laws. All of these interfere with the interest of the public in property values, public health, safety and welfare, and the quality of life and the community environment. The Board further finds that the continued occurrence of such activities and violations is detrimental to the health, safety, and welfare of the people of the Village of Windsor and the businesses thereof and visitors thereto. It is the purpose of the Board of Trustees to create one standardized procedure for securing legal and equitable remedies relating to the subject matter encompassed by this chapter, without prejudice to the use of procedures available under existing and subsequently enacted laws, and to strengthen existing laws on the subject.				
Zoning/Land Use Code	Yes	Chapter 200 of the municipal code	Local	Code
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The zoning ordinance aims to protect people, life, and property by designating land uses.				
Subdivision Ordinance	Yes	Chapter 200 of the municipal code	Local	
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The subdivision ordinance aims to protect people, life, and property by designating land uses.				
Site Plan Code	Yes	Chapter 200 of the municipal code	Local and County	Code Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The site plan ordinance aims to protect people, life, and property by designating land uses.				
Stormwater Management Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Real Estate Disclosure	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>				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
<ul style="list-style-type: none"> In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit. 				
Growth Management	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Environmental Protection Ordinance(s)	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Chapter 21 of the municipal code, 1987	Federal, State, County, and Local	
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>A. By this chapter, the Village of Windsor intends to comply with the provisions of the New York State Environmental Conservation Law and the Rules and Regulations of the National Flood Insurance Program for the regulation of floodplain management districts. This chapter supersedes and repeals Village of Windsor Local Law No. 1 of the year 1975 which provided for such regulation on an interim basis.</p> <p>B. The purpose and intent of the Floodplain Management District is to minimize the potential loss of life and property during periods of flooding by regulating the alteration and/or the development of those areas within the Floodplain Management District delineated on the Village of Windsor Zoning Map, as defined on the Flood Insurance Rate Map and in the Flood Insurance Study for the Village of Windsor. In promoting the general purpose and intent of these regulations, the specific intent of this chapter is to:</p> <p>(1) Control floodplain uses, such as clean fill (including rubble), storage of materials, structures, mining, dredging, filling, grading, paving, excavation or drilling and any other works which, acting alone or in combination with other existing or future uses, will cause damaging flood heights and velocities by obstruction flows and reducing floodwater storage.</p> <p>(2) Protect human life and health.</p> <p>(3) Minimize public and private property damages.</p> <p>(4) Minimize surface and groundwater pollution which may affect human, animal, or plant life.</p>				
Wellhead Protection	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other: Freeboard	Yes	State-mandated BFE+2 for all construction, both residential and non-residential	State, Local	
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>State-mandated BFE+2 for all construction, both residential and non-residential</p>				
Planning Documents				





	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
General/Comprehensive Plan	Yes	Comprehensive Plan	Local	Planning and Village
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Comprehensive Plan guides the development and redevelopment of the Village.				
Capital Improvement Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Disaster Debris Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Floodplain Management or Watershed Plan	Yes	Floodplain Management / Basin Plan, February 2, 1982	Local or Watershed	
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Floodplain Management plan guides the development around the floodplain.				
Stormwater Management Plan	Yes	Stormwater Management Plan, February 2, 1982	Local	
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Stormwater management plan addresses stormwater and how it flows through the Village.				
Open Space Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Urban Water Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Economic Development Plan	Yes	Economic Development Vision	Local	Village Board
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Economic Development Vision addresses what the Village needs to get done within their municipal budget as well as through grant funding.				
Community Wildfire Protection Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Agriculture 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 the plan, date of enactment, or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department, or Agency
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Tourism Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other (for example NYRCR, etc.)				
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Response/Recovery Planning				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan	Local or County; Broome County	Broome County
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The CEMP guides short-term response and long-term recovery by addressing communications, evacuations, and housing needs.				
Continuity of Operations Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Substantial Damage Response Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Post-Disaster Recovery Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Public Health Plan	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Other	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				





Development and Permitting Capability

Table 9.25-3 summarizes the capabilities of the Village of Windsor to oversee and track development.

Table 9.25-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	Yes	Code Enforcement
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Flood Area is tracked
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of build-out in your jurisdiction.	N/A	80%

Administrative and Technical Capability

Table 9.25-4 summarizes potential staff and personnel resources available to the Village of Windsor and their current responsibilities that contribute to hazard mitigation.

Table 9.25-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Village Planning Board meets as needed
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	
Public Works/Highway Department	No	-
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	DPW
Mutual aid agreements	Yes	Town of Windsor and Broome County
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-





Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Other	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Code Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Code Department
Planners or engineers with an understanding of natural hazards	Yes	Code Department
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments.	Yes	Code Office
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Code Department
Environmental scientists familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Mayor
Grant writer(s)	Yes	Steven Contento
Resilience Officer	No	-
Other (NFIP Floodplain Administrator FPA)	Yes	Code Department

Fiscal Capability

Table 9.25-5 summarizes financial resources available to the Village of Windsor.

Table 9.25-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital improvement project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds.	No
Incur debt through special tax bonds.	No
Incur debt through private activity bonds.	No
Withhold public expenditures in hazard-prone areas.	No
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No





Education and Outreach Capability

Table 9.25-6 summarizes the education and outreach resources available to the Village of Windsor.

Table 9.25-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	Yes	-
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms/programs to inform citizens about natural hazards, risks, and ways to protect themselves during such events	No	-

Community Classifications

Table 9.25-7 summarizes classifications for community programs available to the Village of Windsor.

Table 9.25-7. 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)	Yes	ISO 6 (1-2 family), ISO 5 (commercial)	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	No	-	-
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

N/A Not applicable

- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 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 9.25-8 summarizes the adaptive capacity for





each identified hazard of concern and the Village’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 9.25-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Weak
Extreme Temperature	Moderate
Flood	Moderate
Invasive and Nuisance Species	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Wildfire	Moderate

9.25.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9.25-1 is responsible for maintaining this information.

National Flood Insurance Program (NFIP) Summary

Table 9.25-9 summarizes the NFIP statistics for the Village of Windsor.

Table 9.25-9. Village of Windsor NFIP Summary of Policy and Claim Statistics

# Policies	10
# Claims (Losses)	12
Total Loss Payments	\$113,624
# Repetitive Loss Properties (NFIP definition)	2
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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 2023

Note: Statistics are current as of October 2023.

Flood Vulnerability Summary

Table 9.25-10 provides a summary of the NFIP program in the Village of Windsor.

Table 9.25-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Areas near the river and streams within the village and the flood plain.
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	Homeowners were notified about flood mitigation practices; no list is maintained.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	There were a few interested in mitigation, but the number was small for elevation and or acquisition.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Procedures need to be developed
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigation properties, how were the projects funded?	30 Main Street did some mitigation to well vaults
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code enforcement and streets and water dept.
Are any certified floodplain managers on staff in your jurisdiction?	The code enforcement officer
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Provide an explanation of the NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit reviews, outreach



NFIP Topic	Comments
How do you determine if the proposed development on an existing structure would qualify as a substantial improvement?	Procedures not in place
What are the barriers to running an effective NFIP program in the community, if any?	None
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, state the violations. 	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	N/A
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 21 of the municipal code
What is the date that your flood damage prevention ordinance was last amended?	February 2, 1982
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> If exceeds, in what ways? 	Yes
Are there other local ordinances, plans, or programs (e.g., site plan review) that support floodplain management and meet the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	No
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

9.25.5 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 9.25-11 through Table 9.25-13

Table 9.25-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			Total
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	
2019				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2020				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2021				
Total Permits	N/A	N/A	N/A	N/A





	New Construction Permits Issued			
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
Permits within SFHA	N/A	N/A	N/A	N/A
2022				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A
2023				
Total Permits	N/A	N/A	N/A	N/A
Permits within SFHA	N/A	N/A	N/A	N/A

SFHA Special Flood Hazard Area (1% flood event)

Table 9.25-12. Recent Major Development and Infrastructure from 2018 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
Old Rt 17 Bridge over Hotchkiss Creek	Infrastructure	None	Old Rt 17	1% and 0.2% Flood Hazard Area, Wildfire Interface	Completed

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

Table 9.25-13. 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
None Identified					

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

9.25.6 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 Village of Windsor’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

Hazard Area

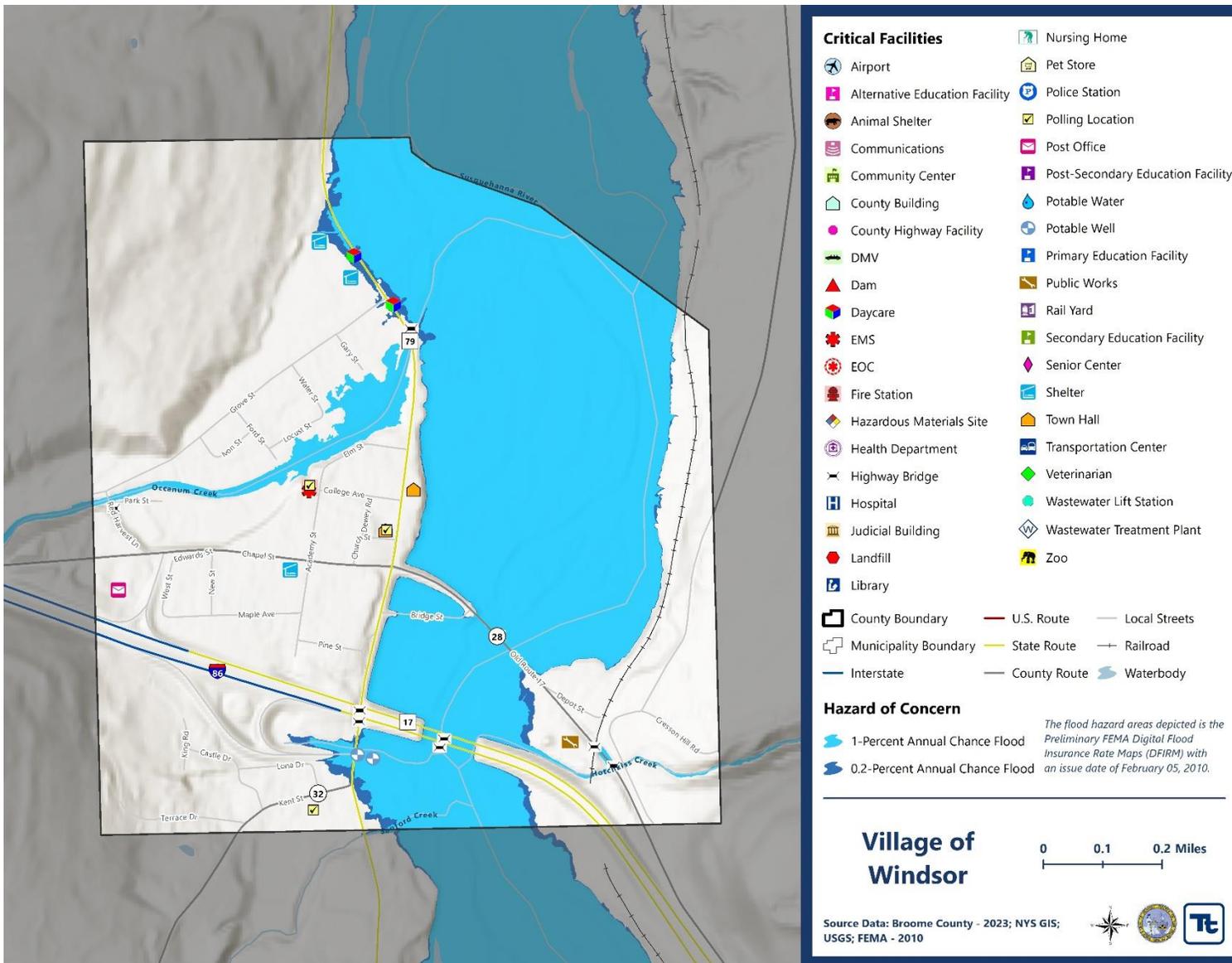
Hazard area maps provided below illustrate the probable hazard areas impacted within the Village are shown in Figure 9.25-1 through Figure 9.25-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified using mapping techniques and technologies and for which Windsor has significant exposure. The maps show the location of potential new development, where available.





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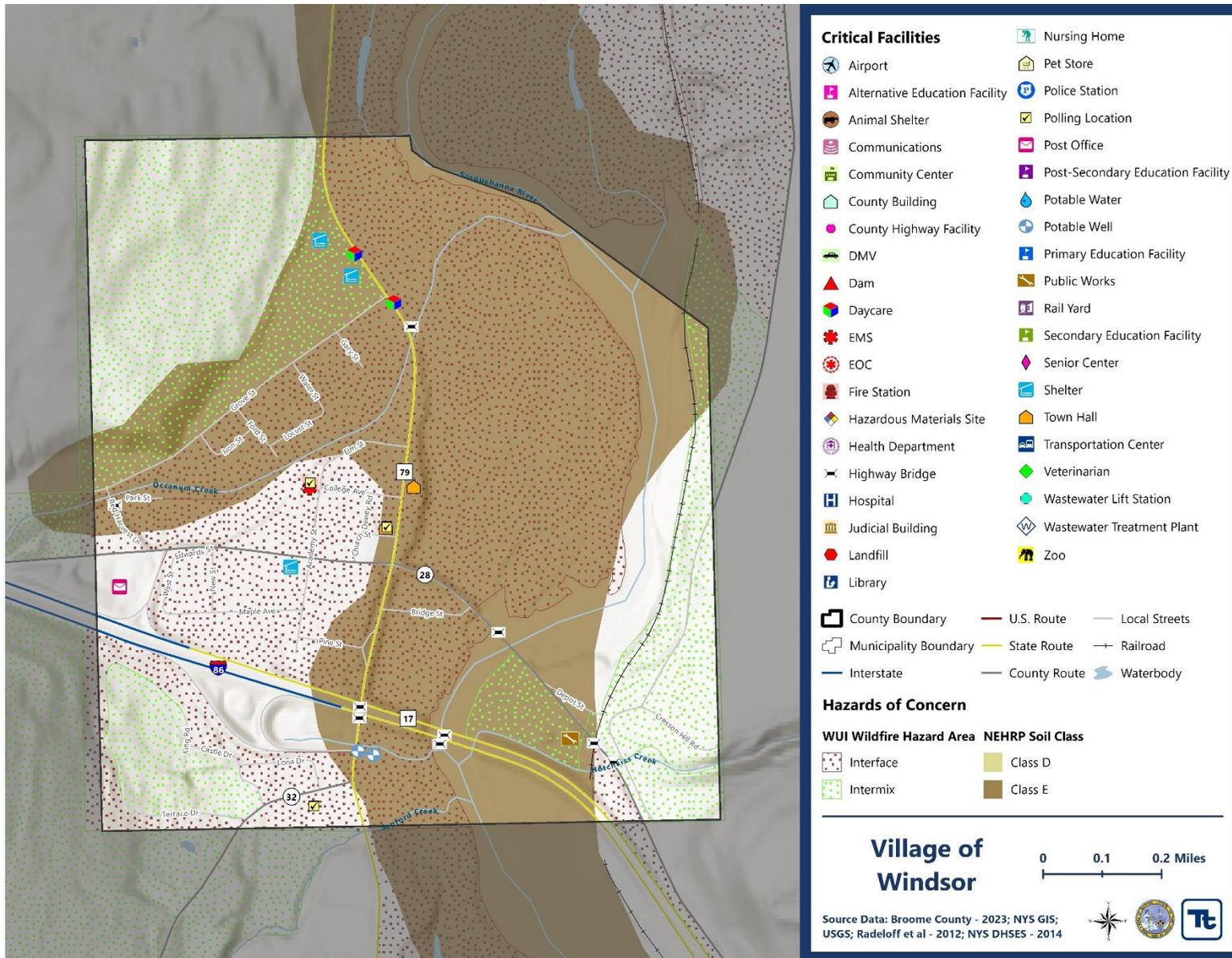
Figure 9.25-1. Village of Windsor Flood Hazard Area Extent and Location Map





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Figure 9.25-2. Village of Windsor NEHRP and Wildfire Hazard Area Extent and Location Map





Hazard Event History

The history of natural and non-natural hazard events in the Village of Windsor is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9.25-14 provides details on loss and damage in the Village during hazard events since the last hazard mitigation plan update.

Table 9.25-14. Hazard Event History in the Village of Windsor

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Summary of Damage and Losses in the Village
April 15, 2019	EF-1 Tornado	No	Severe thunderstorms and a tornado developed. An EF-1 tornado with maximum sustained winds of 100 mph caused damage in the Port Crane, Fenton, and Colesville areas; the tornado caused \$15,000 in property damages.	The Village did not experience any additional damages or losses.
January 20, 2020 – May 11, 2023	Disease Outbreak (EM-3434-NY), (DR-4480-NY)	Yes	As of June 30, 2023, the New York Department of Health has reported 60,108 reported cases and 617 reported deaths in Broome County.	The Village did not experience any additional damages or losses.
December 24 -25, 2020	Flash Flood, Flood	No	Warm air and windy conditions rapidly melted substantial snowpack. This, coupled with heavy rainfall, contributed to rapid stream rises resulting in flash flooding, followed by flooding of the main river channels on Christmas Day. This event caused \$445,000 in property damages.	The Village did not experience any additional damages or losses.
April 18-19, 2022	Heavy Snow	No	Heavy snow, accumulating to 6 to 15 inches, brought down trees and powerlines, resulting in widespread power outages. Approximately 27,465 customers were without power. \$274,650 in property damages were incurred.	The Village did not experience any additional damages or losses.

Notes:

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

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1 have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following summarizes and presents key risk assessment results for the Village of Windsor.





Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its 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. Windsor 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 Village indicated the following:

- The Village agreed with the hazard rankings.

Table 9.25-15 shows Windsor’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9.25-15. Hazard Ranking

Hazard	Rank
Dam/Levee Failure	Medium
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperature	High
Flood	Low
Invasive Species	Medium
Severe Storm	High
Severe Winter Storm	High
Wildfire	Medium

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 9.25-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9.25-16. Critical Facilities Flood Vulnerability

Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
WELL #1, BEHIND GARAGE	Potable Well	X	X	Action 2024-WindsorV-05	
WELL #2, ACROSS CREEK	Potable Well	X	X	Action 2024-WindsorV-05	
Windsor Central Middle School	Daycare	-	X	Action 2024-WindsorV-05	
Family Child Care	Daycare	-	X	Action 2024-WindsorV-05	
Bridge_1013201	Highway Bridge	X	X		The bridge was built to withstand 0.2% flood.





Name	Type	Exposure		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bridge_1013202	Highway Bridge	X	X		The bridge was built to withstand 0.2% flood.
Bridge_1030410	Highway Bridge	X	X		The bridge was built to withstand 0.2% flood.
Bridge_3349960	Highway Bridge	X	X		The bridge was built to withstand 0.2% flood.
Bridge_3350050	Highway Bridge	X	X		The bridge was built to withstand 0.2% flood.

Source: Broome County 2023, Hazus V6

Identified Issues

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

- The municipality does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The municipality needs a formal process and plans to provide a framework for conducting such inspections and determinations.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Village is currently not a member of the StormReady program.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has two repetitive loss properties, but other properties may be impacted by flooding as well.
- The following critical facilities are municipally owned and located in the special flood hazard area or are prone to flooding:
 - Well #1
 - Well #2
 - Village of Windsor Pumphouse
 - Windsor Central Middle School
 - Family Child Care
- The Flood Damage Prevention Ordinance has not been updated since 1982 and needs an update and HMP integration.
- The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations.

**This issue was identified as a specific area of concern based on resident response to the Broome County Hazard Mitigation Citizen survey.*





9.25.7 Mitigation Strategy and Prioritization

This section discusses past mitigation actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

Table 9.25-17 indicates progress on the Village'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 9.25-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
V. Windsor-1	Protect Well #1, behind the garage to the 500-year flood level	Flood	Facility manager, Village	The Well is located in the 100-year floodplain	1. No Progress 2. Issue of funding	1. Include 2. Well #1 is a critical facility in the floodplain.
V. Windsor-2	Protect Well #2, behind the garage to the 500-year flood level	Flood	Facility manager, Village	The Well is located in the 100-year floodplain	1. No Progress 2. Issue of funding	1. Include 2. Well #2 is a critical facility in the floodplain.
V. Windsor-3	Protect the Windsor Central Middle School behind the garage from the 500-year flood level	Flood	Village Floodplain Administrator working with facility operators/owners	The school is a shelter and is located in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.	1. No Progress 2. Issue of funding	1. Include 2. The Windsor Central Middle School is located in the floodplain
V. Windsor-4	Protect the Windsor United Methodist Church behind garage to the 500-year flood level	Flood	Village Floodplain Administrator working with facility operators/owners	The Church is a shelter and is located in the 100-year floodplain. The Village does not have jurisdiction over the facility and cannot mitigate itself.	1. No Progress 2. New critical facility data shows that this facility is not located in the floodplain	1. Discontinue 2. New critical facility data shows that this facility is not located in the floodplain
V. Windsor-5	Repetitive Loss Properties	Flood, Severe Storm	Village Floodplain Administrator working with homeowner	Two properties are identified as repetitive loss properties.	1. No Progress 2. Issue of funding	1. Include 2. Two repetitive loss properties were identified as of October 2023
V. Windsor-6	Update the NFIP Flood Damage Prevention Ordinance	Flood	Floodplain Administrator	The current flood damage prevention ordinance (1987) does not include	1. No Progress 2. Staffing limitations	1. Include 2. The current flood damage prevention ordinance (1987) does not include NYS freeboard requirements



Project Number	Project Name	Hazard(s) Addressed	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 2024 HMP or Discontinued 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				NYS freeboard requirements.		



Proposed Hazard Mitigation Initiatives for the HMP Update

Windsor participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included a review of the following FEMA documents:

- 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 Windsor 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 the Village’s priorities.

Table 9.25-18 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. Table 9.25-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 9.25-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam/Levee Failure	X	-	-	X	X	-	X	-	-	X
Disease Outbreak	-	-	-	X	-	-	X	-	-	
Drought	X	-	-	X	X	-	X	-	-	X
Earthquake	X	-	-	X	X	-	X	-	-	X
Extreme Temperature	X	-	-	X	X	-	X	-	-	X
Flood	X	X	-	X	X	X	X	-	-	X
Invasive and Nuisance Species	X	-	-	X	-	-	X	-	-	X
Severe Storm	X	X	-	X	X	X	X	-	-	X
Severe Winter Storm	X	X	-	X	X	X	X	-	-	X
Wildfire	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 stormwater 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 9.25-19. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Action 2024-WindsorV-01	Substantial Damage Management Plan	1	1	1	1	1	1	1	0	1	1	1	1	1	0	12	High
Action 2024-WindsorV-02	Debris Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
Action 2024-WindsorV-03	StormReady Program Participation	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High
Action 2024-WindsorV-04	Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
Action 2024-WindsorV-05	Critical Facilities Prone to Flooding	1	1	1	1	1	0	0	1	1	0	1	1	1	0	10	Medium
Action 2024-WindsorV-06	Update the NFIP Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	1	1	1	1	1	0	0	12	High
Action 2024-WindsorV-07	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High

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



Action 2024-WindsorV-01. Substantial Damage Management Plan

Action Name:	Substantial Damage Management Plan	
Description of the Problem:	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"> • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for “market value” and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure’s pre-damage value. • Require permits for floodplain development. <p>The municipality does not have a Substantial Damage Management Plan in place, nor does it have a formal process in place when conducting substantial damage determinations. The municipality needs a formal process and plans to provide a framework for conducting such inspections and determinations.</p>	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	<p>The municipality will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damage_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Plan Board	
Estimated Cost:	\$5,000	
Potential Funding Sources:	<i>Municipal Budget</i>	
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan.	
Goals Met:	1	
Benefits:	This plan will provide a process for making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<input checked="" 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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliant with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.	
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.	





Impact of Capabilities:	This action improves disaster recovery capabilities.		
Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future developments in the municipality.		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides additional planning for disaster recovery.		
Priority: Check one	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on state or federal resources following disaster events		Resources may not be available during major widespread events
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations.		A plan outlining responsibility is still necessary to prevent missing important requirements.



Action 2024-WindsorV-02. Debris Management Plan

Action Name:	Debris Management Plan		
Description of the Problem:	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for the execution of the plan. The plan will align with permitted temporary collection areas.		
Lead Agency:			
Supporting Agencies:	Broome County		
Estimated Cost:	Staff Time		
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Village Budget		
Implementation Timeline:	Within 5 Years		
Goals Met:	1		
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.		
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	N/A		
Impact on Critical Facilities/Lifelines:	N/A		
Impact of Capabilities:	The action will result in increased post-disaster capabilities.		
Impact on Future Development:	N/A		
Climate Change Considerations:	Climate change may increase the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Rely on federal cleanup.		These services may or may not be available.





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	Rely on state cleanup.	These services may or may not be available.
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Action 2024-WindsorV-03. StormReady Program Participation

Action Name:	StormReady Program Participation	
Description of the Problem:	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Village is currently not a member of the StormReady program.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will coordinate with the local NWS office to complete all requirements to become a StormReady community.	
Lead Agency:	Planning Board	
Supporting Agencies:	Broome County, FEMA	
Estimated Cost:	Staff Time	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 2, 3	
Benefits:	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	To become certified, a community must demonstrate that they have methods of communication available 24 hours a day that reach the whole community during a severe weather event and that all members of the community are incorporated into emergency planning efforts.	
Impact on Critical Facilities/Lifelines:	Being a part of the StormReady program would result in improved critical facility readiness.	
Impact of Capabilities:	<ul style="list-style-type: none"> Improves coordination between emergency managers, NWS personnel, and members of the community to develop and issue timely and effective warnings ahead of severe weather events. StormReady requires participation in regular exercises to test and demonstrate readiness for severe weather events. 	
Impact on Future Development:	This action will result in increased warning system capabilities for all current and future developments.	
Climate Change Considerations:	As severe weather events increase, and trends become less predictable year-to-year, emergency and hazardous weather plans will need to be updated more frequently and potentially for events that are not typical for the area.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation





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	No Action	-
	Increase warning system capabilities without StormReady guidance	No CRS points would be available. Less public awareness and support from NWS.
	Hire a third party to conduct emergency warning system improvements	Costly. No CRS points would be available. Less public awareness and support from NWS.





Action 2024-WindsorV-04. Repetitive Loss Properties

Action Name:	Repetitive Loss Properties		
Description of the Problem:	Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has two repetitive loss properties, but other properties may be impacted by flooding as well.		
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	Conduct outreach to 10 flood-prone property owners, including RL/SRL property owners, 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).		
Lead Agency:	Floodplain Administrator		
Supporting Agencies:	Planning Board, Broome County, FEMA		
Estimated Cost:	Staff Time		
Potential Funding Sources:	HMGP, BRIC, FMA, Broome County, Annual Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 5		
Benefits:	Eliminates flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.		
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)	
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 Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand for utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact of Capabilities:	Removing the risk from the immediate floodplain via the acquisition of properties will free up resources for search and rescue and other emergency operations as needed.		
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.		
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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low





SECTION 9.25. Village of Windsor

Alternatives	Action	Evaluation
	No Action	-
	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 2024-WindsorV-05. Critical Facilities Prone to Flooding

Action Name:	Critical Facilities in the Floodplain	
Description of the Problem:	<p>The following critical facilities are municipally owned and located in the special flood hazard area or are prone to flooding:</p> <ul style="list-style-type: none"> • Well #1 • Well #2 • Village of Windsor Pumphouse • Windsor Central Middle School • Family Child Care 	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	<p>The Village will conduct a feasibility assessment to determine what additional floodproofing measures are needed at Well #1, Well #2, Windsor Central Middle School, Family Child Care Center, and the Village of Windsor Pumphouse to protect each to the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> • Elevation of facility • Floodproofing of facility • Mobile flood-barriers <p>Once the most cost-effective option is identified, the Village will carry out the option.</p>	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Planning Board, Broome County, FEMA	
Estimated Cost:	TBD after the option determined	
Potential Funding Sources:	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 5	
Benefits:	Ensures continuity of operation at Well #1, Well #2, and the Village of Windsor Pumphouse	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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 checked="" type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.	
Impact on Critical Facilities/Lifelines:	This action will protect Well #1, Well #2, and the Village of Windsor Pumphouse which are critical facilities, maintaining the critical services that they provide.	
Impact of Capabilities:	This action improves the continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post-disaster capabilities.	
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.	
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.	





Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	Relocate facility		Relocation is expensive and results in the loss or delay of critical services in the immediate area.
	Establish plans to enter into an MOU with neighboring critical facilities to provide service during flood events.		Reduction in response times and delay of critical services in the immediate area.



Action 2024-WindsorV-06. Update the NFIP Flood Damage Prevention Ordinance

Action Name:	Action 2024-WindsorV-06. Update the NFIP Flood Damage Prevention Ordinance	
Description of the Problem:	The Flood Damage Prevention Ordinance has not been updated since 1982 and is in need of an update and HMP integration.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
Description of the Solution:	The Village will include updated flood information into their Flood Damage Prevention Ordinance will integrate the current HMP information as needed and will also include the NYS Freeboard requirements.	
Lead Agency:	Floodplain Administrator	
Supporting Agencies:	Village Administration	
Estimated Cost:	Staff Time	
Potential Funding Sources:	Village Budget	
Implementation Timeline:	Within 5 years, after that ongoing	
Goals Met:	1, 2	
Benefits:	The Village will have a more up-to-date Flood Damage Prevention Ordinance	
Mitigation Action Type: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category: <i>Check all that apply</i>	<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 type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be more heavily impacted by flood and an updated floodplain ordinance will more accurately capture the status of flood issues in the Village.	
Impact on Critical Facilities/Lifelines:	N/A	
Impact of Capabilities:	This action improves the Village’s planning capabilities by having updated codes.	
Impact on Future Development:	N/A	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate-related disaster events. This action provides an update to the floodplain ordinance which takes into account the changing climate.	
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium <input type="checkbox"/> Low
Alternatives	Action	Evaluation
	No Action	-
	Rely on FEMA maps	FEMA maps do not help dictate responsibilities and lay out best practices for flood
	Rely on the County Floodplain Damage Prevention Ordinance	The County ordinance is not specific to the Village



Action 2024-WindsorV-07. Socially Vulnerable Populations Outreach

Action Name:	Action 2024-WindsorV-07. Socially Vulnerable Populations Outreach	
Description of the Problem:	The Village does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Village. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.	
Hazard(s) of Concern: <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <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"/> Invasive and Nuisance Species <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
Description of the Solution:	The Village will improve public awareness of hazards (dam and levee failure, disease outbreak, drought, earthquakes, extreme temperature, flood, invasive and nuisance species, severe storms, severe winter storms, and wildfire) on prevention, and mitigation through increased outreach, including but not limited to periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc.; and incorporating as much free information as possible from the FEMA publications warehouse and other appropriate sources on the Village website. The Village will also consider hiring staff to work directly with socially vulnerable populations to ensure a "whole community approach" to hazard mitigation.	
Lead Agency:	Village Administration	
Supporting Agencies:	Broome County	
Estimated Cost:	Low	
Potential Funding Sources:	Village Budget, HMGP	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 3	
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Village. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.	
Mitigation Action Type: <i>Check all that apply</i>	<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: <i>Check all that apply</i>	<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)
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Village will become educated on hazards risks. The Village will identify an individual to identify and work with these populations to ensure the most up to date information is being shared.	
Impact on Critical Facilities/Lifelines:	Educating populations on hazard risk and how to mitigate the risks can decrease the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact of Capabilities:	This action would build upon the Village's already existing public education and outreach program.	
Impact on Future Development:	Not applicable	





Climate Change Considerations:	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.		
Priority: <i>Check one</i>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No action		Current methods remain the only ones used
	Rely on state or federal resources		Resources may be generalized and not specific to the risks in the Village
	Use only a few methods for distribution		Using only a few methods of distribution may hinder socially vulnerable populations from receiving the guidance

