



28. TOWN OF MACHIAS

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

28.1 HAZARD MITIGATION PLANNING TEAM

The Town of Machias 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 Highway Superintendent represented the community on the Cattaraugus County HMP Planning Partnership and supported the local planning process 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 28-1 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 I.

Table 28-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Tim Byroads, Highway Superintendent Address: 3483 Roszyk Hill Road, PO Box 87, Machias NY 14101 Phone Number: (716) 353-8851 Email: machiashwy2015@yahoo.com	Name/Title: Scott Ludka, Code Enforcement Officer Address: 3483 Roszyk Hill Road, PO Box 87, Machias NY 14101 Phone Number: (716) 244-0740 Email: machiasny@outlook.com
National Flood Insurance Program Floodplain Administrator	
Name/Title: Scott Ludka, Code Enforcement Officer Address: 3483 Roszyk Hill Road, PO Box 87, Machias NY 14101 Phone Number: (716) 244-0740 Email: machiasny@outlook.com	

28.2 COMMUNITY PROFILE

The Town of Machias lies in the northeast part of Cattaraugus County in western New York State. The Town of Machias has a total area of 41.08 square miles. Lime Lake Outlet is a stream flowing out the north end of Lime Lake to Cattaraugus Creek. Frog Pond and Sucker Pond are two small bodies of water within the town. The town is bordered to the north by the Town of Yorkshire, to the northeast is the Town of Freedom, to the west is the Town of Ashford, to the southwest is the Town of Ellicottville, the east border is the Town of Farmersville and south is the Town of Franklinville. There are three hamlets located within the town: Bakerstand, Bird, and Machias Junction.

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 2022 5-Year American Community Survey indicates that 3.3 percent of the population is 5 years of age or younger, 24.5 percent is 65 years of age or older, 0 percent is non-English speaking, 17 percent is below the poverty threshold, and 15.1 percent is considered disabled.

28.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

Machias 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 Machias to identify opportunities for integrating mitigation concepts into ongoing Town procedures.

28.3.1 Planning and Regulatory Capability and Integration

Table 28-2 summarizes the planning and regulatory tools that are available to Machias.

Table 28-2. Planning and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
CODES, ORDINANCES, & REGULATIONS				
Building Code	Yes	Local Law 2, 2007: NYS Uniform Fire Prevention and Building Code	State and Local	CEO
How has or will this be integrated with the HMP and how does this reduce risk? This chapter provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) in this Town. This chapter is adopted pursuant to Section 10 of the Municipal Home Ruie Law. Except as otherwise provided in the Uniform Code, other state law, or other section of this chapter, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this chapter.				
Zoning/Land Use Code	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
Subdivision Code How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Site Plan Code How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Stormwater Management Code How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Post-Disaster Recovery/ Reconstruction Code How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Real Estate Disclosure Requirements 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.	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
Growth Management How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Environmental Protection Ordinance(s) How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Flood Damage Prevention Ordinance How has or will this be integrated with the HMP and how does this reduce risk? Promotes public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas. 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 in flood heights or velocities. B. Require that uses vulnerable to floods, including facilities which 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 which 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. F. Qualify for and maintain participation in the National Flood Insurance Program.	Yes	Local Law 1, 1992: Flood Damage Prevention	Federal, State, County and Local	Code Enforcement
Wellhead Protection How has or will this be integrated with the HMP and how does this reduce risk?	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
Emergency Management Ordinance How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Climate Change Ordinance How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Other How has or will this be integrated with the HMP and how does this reduce risk? The general purpose of this Law is the following: to provide for efficient, economic, environmentally safe, and legal operation of the Town's publicly owned treatment works.	Yes	Municipal Separate Storm Sewer System (MS4), 2015-2	Local	Water Operator
PLANNING DOCUMENTS				
General/Comprehensive Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Capital Improvement Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Disaster Debris Management Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Floodplain Management or Watershed Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Stormwater Management Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Open Space Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Urban Water Management Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Habitat Conservation Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Economic Development Plan How has or will this be integrated with the HMP and how does this reduce risk?	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
Community Wildfire Protection Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Community Forest Management Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Transportation Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Agriculture Plan How has or will this be integrated with the HMP and how does this reduce risk? The plan includes recommendations to address critical structural and industry-wide concerns that impact the long-term viability of agriculture in Cattaraugus County; for improving conditions specific to health and well-being of local agricultural enterprises through training, business planning, network development, mentoring, finance, research and development support, and similar services; and to offer programs and processes that address the land use issues facing both towns and farmers.	Yes	Agricultural and Farmland Protection Plan	County	EDPT
Climate Action/Resilience/Sustainability Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Tourism Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Business/ Downtown Development Plan How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
Other How has or will this be integrated with the HMP and how does this reduce risk?	No	-	-	-
RESPONSE/RECOVERY PLANNING				
Comprehensive Emergency Management Plan How has or will this be integrated with the HMP and how does this reduce risk? The CEMP defines the scope of preparedness and emergency management activities necessary in the Town. This document assigns responsibility to organizations and individuals for carrying out specific actions that exceed routine responsibility at projected times and places during an emergency; sets lines of authority and organizational relationships and shows how all actions will be coordinated; identifies how people and property are protected; and identifies personnel, equipment, facilities, supplies, and other resources available within the jurisdiction or by agreement with other jurisdictions.	Yes	Comprehensive Emergency Management Plan, 8/15/2006	Local and County	OEM
Continuity of Operations Plan How has or will this be integrated with the HMP and how does this reduce risk?	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
Substantial Damage Response Plan	No	-	-	-

How has or will this be integrated with the HMP and how does this reduce risk?

Threat and Hazard Identification and Risk Assessment	Yes	Threat & Hazard Identification & Risk Assessment (THIRA)	County	OES
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How has or will this be integrated with the HMP and how does this reduce risk?

The Threat and Hazard Identification and Risk Assessment (THIRA) is a three-step risk assessment process that helps the County understand its risks to natural, technological, and human-caused hazards and what must be done to address those risks.

Post-Disaster Recovery Plan	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?

Public Health Plan	Yes	Health Department Strategic Plan 2022–2025	County	Health Department
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How has or will this be integrated with the HMP and how does this reduce risk?

The Cattaraugus County Health Department’s (CCHD) Strategic Planning Process began in April 2022 using the resources of the New York State Department of Health NYS Public Health Corp Fellows. As a part of this process, the fellows reviewed the 2018–2021 strategic plan for past successes and failures and discussed what was needed for future success. Both an external assessment, in which county demographic data, economic factors, health outcomes, and community health assessment findings that have the potential to affect the agency and strategies were examined, and an internal assessment of a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was completed.

Other: Community Needs Assessment and Community Health Improvement Plan	Yes	Community Needs Assessment and Community Health Improvement Plan	County	Health Department
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How has or will this be integrated with the HMP and how does this reduce risk?

The 2022–2024 OGH/BRMC Community Service Plan (CSP) and the CCHD’s Community Health Assessment and Community Health Improvement Plan (CHA-CHIP) were conducted to identify significant health needs as outlined by the New York State Department of Health’s 2022–2024 Prevention Agenda, where applicable. It also provides critical information OGH/BRMC, the CCHD, and others in a position to make a positive impact on the health of the region’s residents. The CSP/CHA-CHIP enables the health department, hospital, and other community partners to strategically establish priorities, develop interventions, and direct resources to improve the health of residents living in the service area.

The CSP/CHA-CHIP includes a detailed examination of priority areas identified in the NYS Prevention Agenda: (1) prevent chronic diseases; (2) promote a healthy and safe environment; (3) promote healthy women, infants and children; (4) promote well-being and prevent mental health and substance use disorders; and (5) prevent communicable diseases. The Prevention Agenda is a six-year effort to make New York the healthiest state. Developed in collaboration with 140 organizations, the plan identifies New York’s most urgent health concerns, and suggests ways local health departments, hospitals, and partners from health, business, education, and community organizations can work together to solve them.

28.3.2 Development and Permitting Capability

Table 28-3 summarizes the capabilities of Machias to oversee and track development.



Table 28-3. Development and Permitting Capability

	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 buildout in your jurisdiction.	N/A	20%

28.3.3 Administrative and Technical Capability

Table 28-4 summarizes potential staff and personnel resources available to Machias and their current responsibilities that contribute to hazard mitigation.

Table 28-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (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	The Highway Department maintains the Town roads and grounds.
Construction/Building/Code Enforcement Department	Yes	Code Enforcement enforces the construction code and administers the NFIP.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	State mutual Aid
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)	Comment (available staff, responsibilities, support of hazard mitigation)
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 Hazus applications	No	-
Staff that work with socially vulnerable populations or underserved communities	No	-
Environmental scientists familiar with natural hazards	No	-
Surveyors	No	-
Emergency manager	No	-
Grant writers	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

28.3.4 Fiscal Capability

Table 28-5 summarizes financial resources available to Machias.

Table 28-5. 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



Financial Resources	Accessible or Eligible to Use? (Yes/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

28.3.5 Education and Outreach Capability

Table 28-6 summarizes the education and outreach resources available to Machias.

Table 28-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	Yes	Supervisor
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	Yes	County Administrator, Reverse 911, IPAWS
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	-

28.3.6 Community Classifications

Table 28-7 summarizes classifications for community programs available to Machias.

Table 28-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
National Weather Service StormReady Certification	No	-	-
Firewise Communities classification	No	-	-
New York State Climate Smart Communities	No	-	-
Other: Organizations with mitigation focus (advocacy group, non-government)	No	-	-



N/A = Not applicable

— = Unavailable

28.3.7 Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2022). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. Table 28-8 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 28-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam and Levee Failure	Moderate
Flood	Moderate
Landslide	Moderate
Pandemic	Moderate
Severe Storm	Moderate
Severe Winter Storm	Moderate
Utility Failure	Moderate
Wildfire	Moderate

28.4 NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 28-1 is responsible for maintaining this information.

28.4.1 NFIP Statistics

Table 28-9 summarizes the NFIP policy and claim statistics for Machias.

Table 28-9. Machias NFIP Summary of Policy and Claim Statistics

# Policies	1
# 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 2024

28.4.2 Flood Vulnerability Summary

Table 28-10 provides a summary of the NFIP program in Machias.

Table 28-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Areas within the SFHA and occasional flooding in the valleys
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 that the Town is aware of
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Unknown
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Unknown
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.	Flood maps are dated and do not capture localized flooding.
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?	Yes, County GIS



NFIP Topic	Comments
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?	Additional staffing
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	None
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	NYS building code
What are the barriers to running an effective NFIP program in the community, if any?	Funding and Staffing
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)?	CAC: June 23, 1992 CAV: June 16, 1999
What is the local law number or municipal code of your flood damage prevention ordinance?	Local Law 1, 1992: Flood Damage Prevention
What is the date that your flood damage prevention ordinance was last amended?	August 13, 1992
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 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
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

28.5 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 28-11 through Table 28-13.

Table 28-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
2019				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0
2020				
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
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	3	0	0	3
Permits within SFHA	0	0	0	0
2023				
Total Permits	5	0	0	5
Permits within SFHA	0	0	0	0
2024				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

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

Table 28-12. Recent Major Development and Infrastructure from 2019 to Present

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zones*	Description / Status of Development
There has been no recent major development or infrastructure between 2019 to present.					

* Only location-specific hazard zones or vulnerabilities identified.

Table 28-13. 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 Zones*	Description / Status of Development
There are no known or anticipated major development or infrastructure in the next five years.					

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

28.6.1 Hazard Area

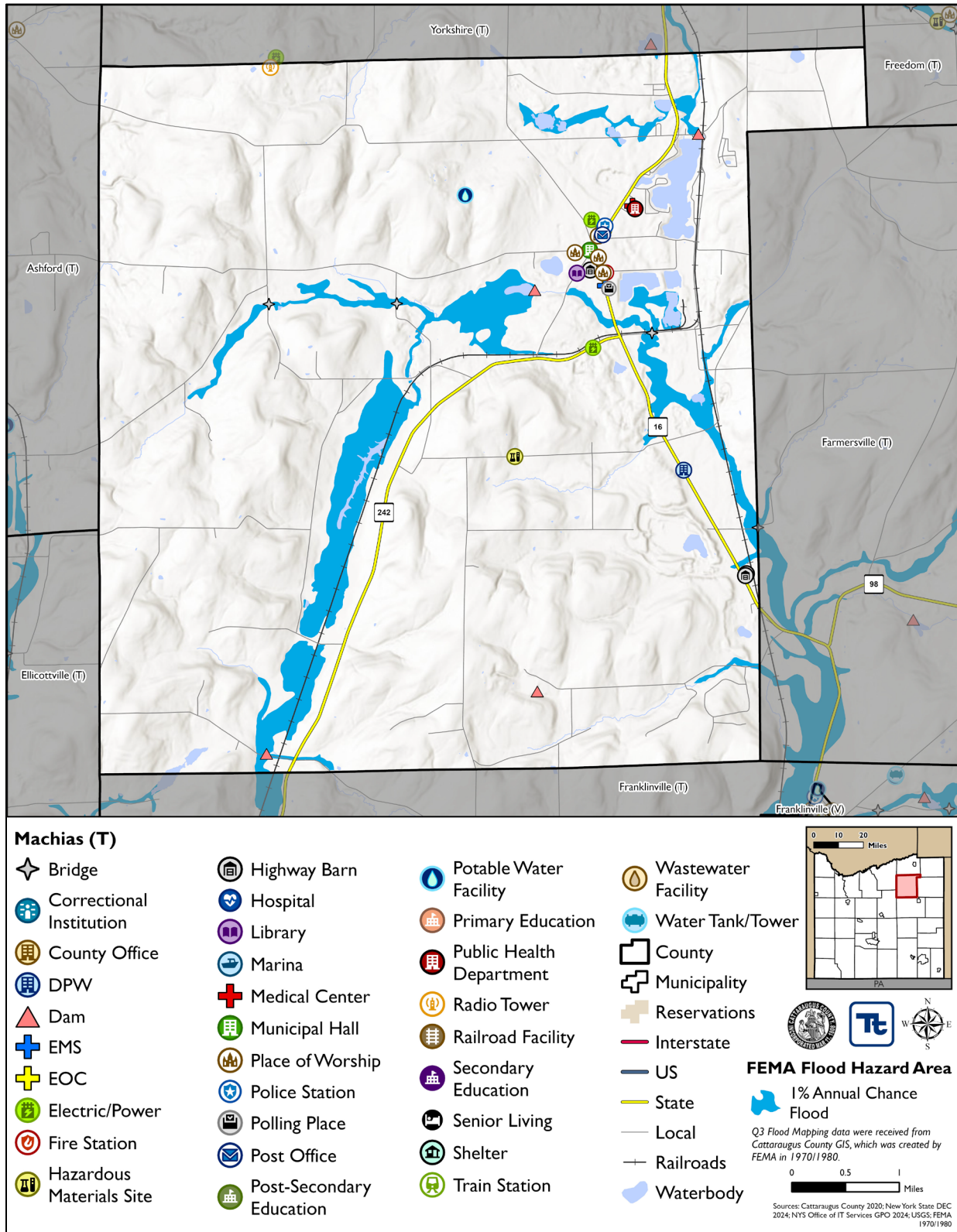
Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 28-1 through Figure 28-2. These maps are based on the best available data at the time of the preparation



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



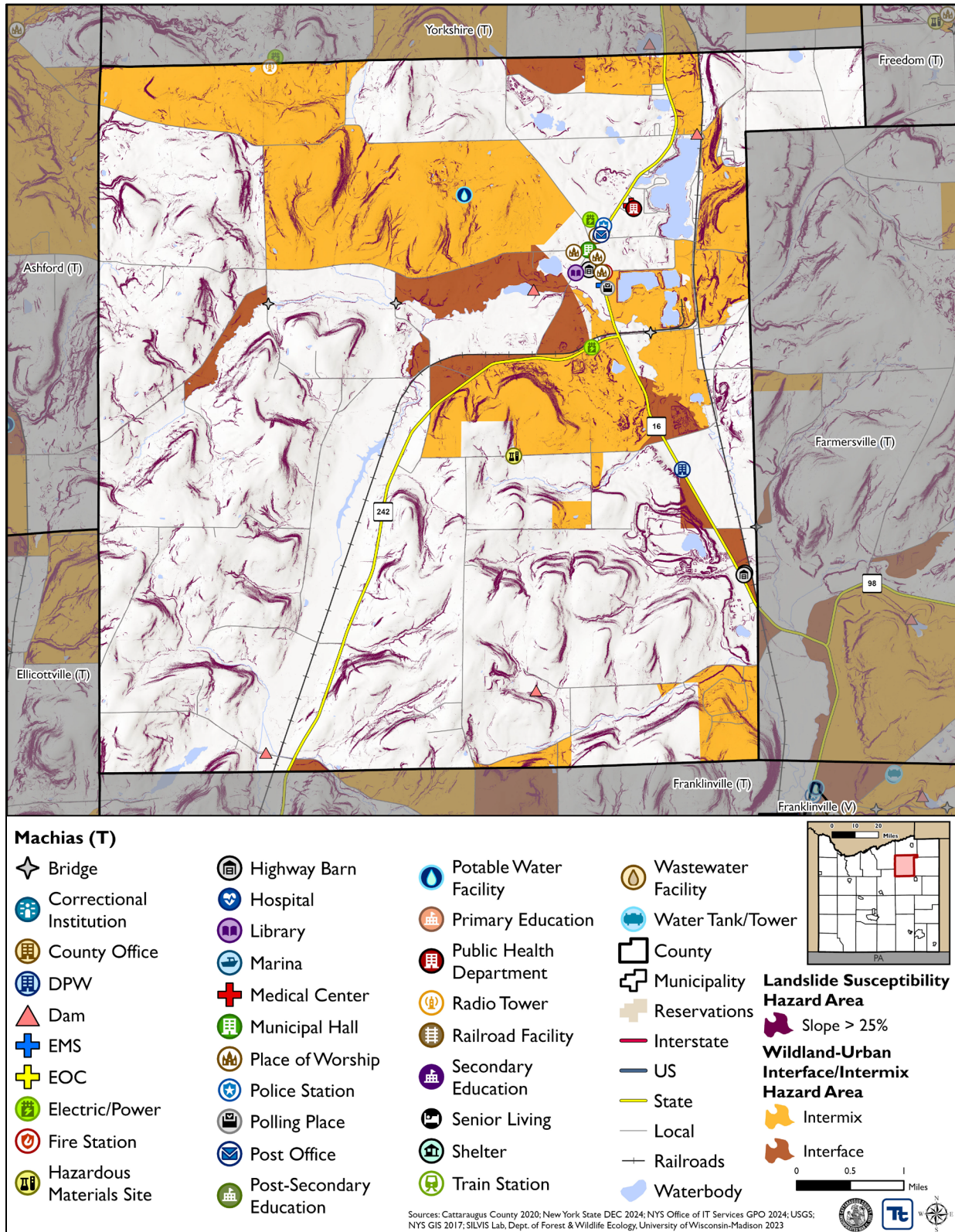
Figure 28-1. Machias Flood Hazard Area Extent and Location Map



Note: The shown flood hazard area is limited to the FEMA-defined flood hazard areas. Areas of localized flooding are not reflected in the above Figure.



Figure 28-2. Machias Landslide and Wildfire Hazard Area Extent and Location Map





28.6.2 Hazard Event History

The history of natural and non-natural hazard events in Machias is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 28-14 provides details on loss and damage in Machias during hazard events since the last hazard mitigation plan update.

Table 28-14. Hazard Event History in Machias

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Machias
October 31-November 1, 2019	DR-4472	No	Severe Storms, Straight-Line Winds, and Flooding	The Town did not incur any documented damages or losses.
March 13, 2020	EM-3434 DR-4480	Yes	COVID-19 Pandemic	The Town abided by social distancing, masking mandates and work from home orders.
January 12, 2020	High Wind	N/A	High wind	The Town did not incur any documented damages or losses.
July 16, 2020	Thunderstorm Wind	N/A	Trees and wires were reported down in Gowanda.	The Town did not incur any documented damages or losses.
July 19, 2020	Thunderstorm Wind	N/A	Multiple reports of trees down around Gowanda, Ashville Bay, Napoli and Portville.	The Town did not incur any documented damages or losses.
August 15, 2020	Flash Flood	N/A	Marble Road and Potter Road in Lime Lake were reported to be washed out by law enforcement.	The Town experienced flooded houses and a washed-out culvert.
September 7, 2020	Thunderstorm Wind	N/A	Property damage in Olean.	The Town did not incur any documented damages or losses.
November 15, 2020	High Wind	N/A	Property damage throughout Cattaraugus County.	The Town did not incur any documented damages or losses.
July 13, 2021	Thunderstorm Wind	N/A	Several reports were received of trees down, trees on cars, trees on houses, and powerlines down in Salamanca, Olean, and Allegany.	The Town did not incur any documented damages or losses.
December 11, 2021	High Wind	N/A	Dozens of reports of trees and powerlines down were received.	The Town did not incur any documented damages or losses.
March 6, 2022	High Wind	N/A	High wind	The Town did not incur any documented damages or losses.
July 24, 2022	Thunderstorm Wind	N/A	Trees and powerlines reported down in East Otto, Randolph, and South Dayton.	The Town did not incur any documented damages or losses.



Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Machias
November 20, 2022	EM-3589	Yes	Severe Winter Storm and Snowstorm	The Town did not incur any documented damages or losses.

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

28.6.3 Hazard Ranking and Vulnerabilities

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

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. Machias 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 rankings were appropriate.

Table 28-15 shows Machias’ final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 28-15. Hazard Ranking

Hazard	Rank
Dam and Levee Failure	Medium
Flood	Medium
Landslide	High
Pandemic	Medium
Severe Storm	High
Severe Winter Storm	High
Utility Failure	Medium
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 28-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.



Table 28-16. Critical Facilities Flood Vulnerability

Name	Type	Vulnerability		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Bentley Wildlife Marsh Dam	Dam	X	-	-	Town completed action to conduct outreach to facility owner.
Ischua Creek Watershed Dam #1	Dam	X	-	-	Town completed action to conduct outreach to facility owner.
Lime Lake Outlet Dam	Dam	X	-	-	Town completed action to conduct outreach to facility owner.
Machias 23	Bridge	X	-	2025-MachiasT-12	-
Machias 28	Bridge	X	-	2025-MachiasT-12	-

Source: Cattaraugus County 2024

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in Machias:

- Ischua Creek Watershed Dam #1

28.6.4 Identified Issues

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

- Floodplain managers require training. Those responsible for floodplain management are lacking in their knowledge of required duties. Training is sorely needed for all municipal officials and for code enforcement officials in charge of municipalities.
- The current flood damage prevention ordinance does not include the 2-foot mandated NYS freeboard requirements. While the existing ordinance may be compliant with NFIP requirements, State requirements which exceed NFIP requirements must be adhered to.
- The Town currently does not have a comprehensive education and outreach program which addresses all identified hazards of concern. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery utilizing a variety of outreach methods. The Town does not currently have hazard mitigation information and outreach on the Town website.
- Critical facilities require backup power to ensure continuity of operations. T6 Machias Volunteer Fire Department does not have automatic backup power, which could impact the continuity of operations at the facility in the event of a utility or power failure. High winds severe weather and severe winter weather are known to cause utility failures, which would impact the continuity of operations at the critical facility. The Volunteer Fire Department is a designated emergency shelter location.
- A culvert on Bear Creek Road is undersized or have been damaged from instances of flooding and the debris caused by severe storms and severe winter storms. The culvert is located at the Bear Creek Bridge, which if it were to collapse due to deterioration from the culvert, up to 100 people in a campground and residence area could be isolated.
- 365 Lakeview Boulevard, which is located at the lowest point of elevation on the boulevard, has flooded from severe storms. The Town worked with NYS DEC to install a bigger pipe to Lime Lake, but the pipe still backs up with water.



- Outdated building codes put new construction at risk during hazard events, as high winds can cause damage to structures, snow loads can impact roofs, and older construction materials may lead a structure to be more susceptible to landslide, severe storm, severe winter storm, and wildfire damages. Swift flowing waters from floods or dam and levee failures can cause structures to buckle or come off its foundation due to the immense pressure.
- Flood prone roads not only interrupt the movement of persons and goods but can lead to isolation issues where first responders are unable to reach their destination and cause evacuation routes to be inaccessible. Flooded road ways may be caused by debris in culverts from severe storms and severe winter storms. There are multiple roads in Town which may benefit from flood mitigation strategies, such as the elevation of the roadways or the hardening of the infrastructure surrounding them to reduce likelihood of flooding.
- The Town 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 Town is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.
- Landslide events are often driven by hazards such as heavy rain events, flooding, heavy snowmelt, and wildfires. Landslides can destroy the natural and built environments, causing detriment to the structures in its path. Landslides may be able to be mitigated by cutting banks to prevent erosion. The Town has many steep sloped areas throughout its jurisdiction and should determine local vulnerabilities to landslides threatening primary roadways and properties.
- Ischua Creek Watershed Dam #1 is a Class I High Hazard Dam that is located on the Ischua Creek. The dam is owned by the County of Cattaraugus. Failure of the dam could result in inundation of residential properties, woodland areas, agricultural and rural lands, and transportation routes including Maple Avenue. Although the dam was last inspected in 2022, the risk of dam failure warrants an engineering evaluation to determine if retrofits of the dam would result in safer conditions.
- Scour on bridges can develop due to erosion. Erosion may occur due to waters impacting the bridge's structure during severe winter storms and severe storms when the precipitation causes the water movements to be more erratic. Rising waters may cause flooding conditions to further erode the structure of the bridge. The following bridges in the jurisdiction should be evaluated to determine useability and to identify potential solutions, as necessary:
 - Machias 23
 - Machias 28
- Federal accreditation of floodwater retention structures shows the dams and levees have met and continue to meet the minimum regulatory standards set by the regulatory agencies. The accreditation of these structures show they are able to support efforts in the mitigation of flood risk.

28.7 MITIGATION STRATEGY AND PRIORITIZATION

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

28.7.1 Past Mitigation Action Status

Table 28-17 indicates progress on the Town's mitigation strategy identified in the 2020 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.



28.7.2 Additional Mitigation Efforts

Machias did not identify any additional mitigation efforts completed since the last HMP.



Table 28-17. 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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020-Machias-001	Protect Bentley Wildlife Marsh Dam to the 0.2% annual chance flood event	Flood	Engineer, facility operator	<p>Problem: the Bentley Wildlife Marsh Dam is in the special flood hazard area and is vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood level</p> <p>Solution: the town will work with the county and discuss options for protecting the dam to the 0.2% annual chance flood event.</p>	<p>1. Completed</p> <p>2. Town reached out to dam owner and provided information on how to protect the facility.</p>	<p>1. Discontinue</p> <p>2. Not applicable</p> <p>3. Town reached out to dam owner and provided information on how to protect the facility.</p>
2020-Machias-002	Work with the county to protect Ischua Creek Watershed Dam #1 to the 0.2% annual chance flood event	Flood	FPA	<p>Problem: the Ischua Creek Watershed Dam #1 is in the special flood hazard area and is vulnerable to flooding.</p> <p>Solution: the town will work with the county and discuss options for protecting the dam to the 0.2% annual chance flood event.</p>	<p>1. Completed</p> <p>2. Town reached out to dam owner and provided information on how to protect the facility.</p>	<p>1. Discontinue</p> <p>2. Not applicable</p> <p>3. Town reached out to dam owner and provided information on how to protect the facility.</p>
2020-Machias-003	Protect Lime Lake Outlet Dam to the 0.2% annual chance flood event	Flood	Engineer, facility operator	<p>Problem: The Lime Lake Outlet Dam is in the special flood hazard area and is vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood level</p> <p>Solution: the town will work with the county and discuss options for protecting the dam to the 0.2% annual chance flood event.</p>	<p>1. Completed</p> <p>2. Town reached out to dam owner and provided information on how to protect the facility.</p>	<p>1. Discontinue</p> <p>2. Not applicable</p> <p>3. Town reached out to dam owner and provided information on how to protect the facility.</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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020-Machias-004	Develop a new Flood Damage Prevention Ordinance	Flood	Town board	Problem: The Town of Machias lacks an updated flood damage prevention ordinance Solution: The town will develop and adopt a flood damage prevention ordinance	1. No Progress 2. Town prioritized completion of other actions	1. Include 2. Not applicable 3. Not applicable
2020-Machias-005	Floodplain Administrator to attend training on floodplain management	Flood	County OES, County Building Codes	Problem: Floodplain Managers require training. Those responsible for floodplain management are lacking in their knowledge of required duties. Solution: Obtain/host training and certification for floodplain managers	1. No Progress 2. Lack of funding to support action	1. Include 2. Not applicable 3. Not applicable
2020-Machias-006	Provide information to residents, business owners, and organizations about what they can do to prevent their structures from wildfires.	Wildfires	Town board	Problem: Additional public education on wildfire risk is needed Solution: the town will develop an outreach program to educate the public about wildfires and what they can do to protect their structures.	1. No Progress 2. Lack of funding to support action	1. Include 2. Expand action to include public outreach to all hazards 3. Not applicable
2020-Machias-007	Generator for Machias Volunteer Fire Department	All Hazards	Machias VFD	Problem: T6 Machias volunteer fire department is a designated emergency shelter location without back up power Solution: Purchase and install a 100-kW generator for the volunteer fire department so they can provide adequate backup	1. No Progress 2. Lack of funding to support action	1. Include 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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				power to 300 people for short term/long term in the event of an emergency during a storm.		
2020-Machias-008	Bridge Replacement on Bear Creek Rd	Flood, Severe Storm	Town Highway Dept.	Problem: Culvert to potentially collapse trapping up to 100 people in a campground/residence area. Solution: Replace bridge on Bear Creek Road	1. No Progress 2. Lack of funding to support action	1. Include 2. Not applicable 3. Not applicable
2020-Machias-009	Protect home on 365 Lakeview Blvd from flooding	Flood, Severe Storm	Town	Problem: Home at the lowest spot of Lakeview Blvd has flooded from storms. The town worked with DEC to install a bigger pipe to the lake, but it still backs up water. Solution: Conduct a study to determine the best mitigation action to prevent flooding of the home.	1. No Progress 2. Lack of funding to support action	1. Include 2. Not applicable 3. Not applicable
2020-Machias-010	Update the Emergency Operations Plan	All Hazards	County, Town	Problem: outdated emergency operation plan Solution: Solution: Update the town's emergency operation plan	1. No Progress 2. Town utilizes County plan.	1. Discontinue 2. Not applicable 3. Town utilizes County plan.
2020-Machias-011	Update Building Codes	All Hazards	County, Town	Problem: Outdated building codes Solution: Update the town's building codes	1. In Progress 2. Town currently working on reviewing and revising building codes	1. Include 2. Not applicable 3. Not applicable



28.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Machias 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 Machias 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 Town priorities.

Table 28-18 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 28-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.



Table 28-18. 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 and Levee Failure	X	X		X	X		X		X	
Flood	X	X		X	X		X		X	X
Landslide	X	X		X	X		X			
Pandemic				X			X			
Severe Storm	X	X		X	X		X		X	X
Severe Winter Storm	X	X		X	X		X		X	X
Utility Failure		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 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 28-19. Summary of Prioritization of Actions

Project Number	Project Name	Scores for Evaluation Criteria														High / Medium / Low	
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives		Total
2025-MachiasT-01	Floodplain Management Training	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2025-MachiasT-02	Flood Damage Prevention Ordinance Update	1	1	1	1	1	1	1	1	1	1	1	1	0	0	12	High
2025-MachiasT-03	Comprehensive Outreach Program	1	1	1	1	1	1	0	1	1	1	1	1	0	1	12	High
2025-MachiasT-04	Generators at Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2025-MachiasT-05	Bear Creek Bridge	1	1	1	1	1	0	0	1	0	1	1	1	1	1	11	High
2025-MachiasT-06	Lakeview Boulevard	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-MachiasT-07	Review and Revise Building Codes	1	1	1	1	1	1	0	0	1	1	1	1	0	0	10	Medium
2025-MachiasT-08	Floodprone Roads	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-MachiasT-09	Substantial Damage Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2025-MachiasT-10	Landslide Mitigation	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-MachiasT-11	Ischua Creek Watershed Dam #1 Rehab	1	1	1	1	0	0	1	1	1	0	1	1	1	1	11	High
2025-MachiasT-12	Bridge Evaluations	1	1	1	1	0	0	1	1	1	1	1	1	1	0	11	High
2025-MachiasT-13	Federal Accreditation Standards	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High

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



Action 2025-MachiasT-01. Floodplain Management Training

Lead Agency:	Code Enforcement		
Supporting Agencies:	Town Council		
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	Floodplain managers require training. Those responsible for floodplain management are lacking in their knowledge of required duties. Training is sorely needed for all municipal officials and for code enforcement officials in charge of municipalities. Very little zoning precludes homeowners from building in floodplains, leading to problems later.		
Description of the Solution:	Where feasible, the Town will have Code staff attend trainings at FEMA's EMI in Emmitsburg Maryland for NFIP Basics and the Intermediate Floodplain management course (E0273). Where not feasible, officials will attend virtual trainings and review available resources from FEMA and ASFPM at the ASFPM (https://www.floods.org/) website. Encourage staff to become Certified Floodplain Managers via the Association of State Floodplain Manager's CFM Certification Program.		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 3, 4		
Benefits:	Providing an opportunity for staff and officials to become further educated on floodplain management practices and standards can aid in the development of plans and procedures in a way that is conscious of the flood hazard.		
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 Future Development:	Officials that understand best practices in floodplain management will have the opportunity to influence future development and prevent unsafe building in flood hazard areas.		
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 the prepare for, plan for, and prevent interruptions in service as a result of a flood.		
Impact on Capabilities:	Officials that attend trainings will have a more confident understanding of floodplain management principles and the basics of NFIP requirements and standards.		
Climate Change Considerations:	Climate change is likely to result in stronger and more frequent rainfall events that will contribute to increased flood risk		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action		Evaluation
	No Action		Current problem exists
	Hire outside contractors for floodplain administration		Costly
	Establish shared service agreements for floodplain administration from neighboring municipalities		Neighboring municipalities are unlikely to have the staff capacity to take on this role



Action 2025-MachiasT-02. Flood Damage Prevention Ordinance Update

Lead Agency:	Code Enforcement		
Supporting Agencies:	Town Council		
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	The current flood damage prevention ordinance does not include the 2-foot mandated NYS freeboard requirements. While the existing ordinance may be compliant with NFIP requirements, State requirements which exceed NFIP requirements must be adhered to.		
Description of the Solution:	The Town will work with Cattaraugus County and NYSDEC to ensure its Flood Damage Prevention Ordinance is updated to adhere to NYS requirements. After obtaining the appropriate review and concurrence by the NFIP State Coordinator and the FEMA Regional Office, the Town will update and adopt the Flood Damage Prevention Ordinance.		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	Within 3 years		
Goals Met:	1, 2, 4		
Benefits:	The updated ordinance will improve floodplain management, meet NFIP and State requirements, and increase resilience of new and substantially improved structures in the floodplain.		
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 Future Development:	The action will result in stronger regulation of construction standards for future development in the Special Flood Hazard Area.		
Impact on Critical Facilities/Lifelines:	Critical facilities and lifelines located in the Special Flood Hazard Area will be required to meet the requirements set forth in the ordinance.		
Impact on Capabilities:	This action will improve floodplain management capabilities through better outlining of responsibilities and administrative procedures.		
Climate Change Considerations:	The updated ordinance includes the State's higher standards that are in place to address heightened flood risk due to climate change such as those for floodway rise and mandatory freeboard.		
Mitigation Category	<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	<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)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action		Evaluation
	No Action		Current problem exists
	Update only freeboard requirements		Other areas of the ordinance which need to be updated would not be
	Leave NFIP		Residents lose flood insurance coverage



Action 2025-MachiasT-03. Comprehensive Outreach Program

Lead Agency:	Town Supervisor		
Supporting Agencies:	Town Council, Cattaraugus County		
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Utility Failure <input checked="" type="checkbox"/> Wildfire	
Description of the Problem:	The Town currently does not have a comprehensive education and outreach program which addresses all identified hazards of concern. There is a need to educate residents and businesses about hazard mitigation, preparation, response, and recovery utilizing a variety of outreach methods. The Town does not currently have hazard mitigation information and outreach on the Town website.		
Description of the Solution:	Create outreach materials, or utilize those from Cattaraugus County, on hazard risks and methods of mitigation measures, including those for dam and levee failure, flood, landslide, pandemic, severe storm, severe winter storm, utility failure, and wildfire. 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. Outreach materials will be specified with education and information for each individual hazard of concern.		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	1 year		
Goals Met:	1, 2, 3, 4		
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.		
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the various hazards which may impact them in the Town.		
Impact on Future Development:	Not applicable		
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 on Capabilities:	This action would build upon the County's already existing public education and outreach program and adapt it to the Town's needs.		
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.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action		Evaluation
	No Action		Current problem exists
	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 2025-MachiasT-04. Generators at Critical Facilities

Lead Agency:	Engineering		
Supporting Agencies:	Town Council, T6 Machias Volunteer Fire Department		
Hazards of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	Critical facilities require backup power to ensure continuity of operations. T6 Machias Volunteer Fire Department does not have automatic backup power, which could impact the continuity of operations at the facility in the event of a utility or power failure. High winds severe weather and severe winter weather are known to cause utility failures, which would impact the continuity of operations at the critical facility. The Volunteer Fire Department is a designated emergency shelter location.		
Description of the Solution:	The Town Engineer will conduct a study to determine the required generator capacity to support the critical facility. The Town will then purchase and install the generator and all necessary electrical hookup components. The installation of the back-up emergency generators will ensure continuity of operations for this critical facility and its operations during each identified hazard of concern. With expectations to provide essential services during times of emergency and otherwise, having a back-up power source is crucial. Long-term risks are mitigated through an emergency generator by reducing the likelihood of impacts from power outages, allowing essential services to continue.		
Estimated Cost:	High		
Potential Funding Sources:	FEMA HMA, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 4, 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.		
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 Future Development:	This action results in protection of a critical facility that could support future development.		
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 on Capabilities:	This action ensures continuity of operations to maintain capabilities.		
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.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	Action		Evaluation
	No Action		-
	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 2025-MachiasT-05. Bear Creek Bridge

Lead Agency:	Engineering		
Supporting Agencies:	Highway Department		
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	A culvert on Bear Creek Road is undersized or have been damaged from instances of flooding and the debris caused by severe storms and severe winter storms. The culvert is located at the Bear Creek Bridge, which if it were to collapse due to deterioration from the culvert, up to 100 people in a campground and residence area could be isolated.		
Description of the Solution:	The Town Engineer will lead an assessment of the bridge and culvert to determine what repairs are necessary or may be feasible. Once a course of action has been identified, the Town will carry out the improvements.		
Estimated Cost:	High		
Potential Funding Sources:	Town Budget, NYS DOT, BRIDGENY, CHIPS		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	Infrastructure will be protected from future hazard damages. Ensures at least a single transportation route remains accessible to the community.		
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations reach needed service provided by the Town.		
Impact on Future Development:	Future development in the impacted area will be able to access critical facilities and community lifelines.		
Impact on Critical Facilities/Lifelines:	Ensures transportation routes remain open and accessible to the public for daily use and evacuation needs. Provides a point of access for first responders into communities that may have faced damage from a hazard event on either side of the bridge.		
Impact on Capabilities:	Increases community resiliency to flooding events in vulnerable areas that would normally be vulnerable to prolonged isolation after high-water events.		
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No Action	Current problem exists	
	Remove bridge	Not feasible, costly	
	Build new bridge	Not feasible, costly	



Action 2025-MachiasT-06. Lakeview Boulevard

Lead Agency:	Engineering		
Supporting Agencies:	Highway Department		
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	365 Lakeview Boulevard, which is located at the lowest point of elevation on the boulevard, has flooded from severe storms. The Town worked with NYS DEC to install a bigger pipe to Lime Lake, but the pipe still backs up with water.		
Description of the Solution:	<p>The Town will develop specific mitigation solutions for Lakeview Boulevard after conducting a flood study. Possible solutions may include:</p> <ul style="list-style-type: none"> • Elevation of roadways • Installation or improvement of drainage systems • Regrading of roadway and soils • Resurfacing or reshaping roadways <p>The Town will also inquire with the property owner of 365 Lakeview Boulevard if they would be interested in the elevation or acquisition of their property.</p>		
Estimated Cost:	TBD after mitigation technique is chosen		
Potential Funding Sources:	FEMA HMA, Town Budget, CHIPS		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.		
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
Impact on Critical Facilities/Lifelines:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.		
Impact on Capabilities:	This action improves the Town's reliability in terms of transportation.		
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No Action	Current problem exists	
	Relocate all flood-prone road system	Not feasible	
	Raise all flood prone roads	Cost prohibitive	



Action 2025-MachiasT-07. Review and Revise Building Codes

Lead Agency:	Code Enforcement	
Supporting Agencies:	Town Council	
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input checked="" type="checkbox"/> Wildfire
Description of the Problem:	Outdated building codes put new construction at risk during hazard events, as high winds can cause damage to structures, snow loads can impact roofs, and older construction materials may lead a structure to be more susceptible to landslide, severe storm, severe winter storm, and wildfire damages. Swift flowing waters from floods or dam and levee failures can cause structures to buckle or come off its foundation due to the immense pressure.	
Description of the Solution:	The Town will review and revise building codes to integrate hazard mitigation principles to create a more resilient community. The Town will also use available tools and resources from FEMA and other sources to integrate climate adaptation planning such as FEMA's "Climate Adaptation Planning: Guidance for Emergency Managers" document. Updated building codes will meet the minimum requirements set by the State.	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget	
Implementation Timeline:	4 years	
Goals Met:	1, 4	
Benefits:	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.	
Impact on Socially Vulnerable Populations:	Communities that collaborate and coordinate their regulatory efforts are more likely to have identified ways to best work with vulnerable populations to increase their level of preparedness.	
Impact on Future Development:	Updated building and zoning codes ensure that any new development that does take place is built to the safest standards based upon the best available data.	
Impact on Critical Facilities/Lifelines:	Integrating mitigation into building and zoning protects existing infrastructure and guides the safe development of new construction.	
Impact on Capabilities:	A consolidated review 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.	
Climate Change Considerations:	As the climate changes, regulatory processes will require a more intense focus on maintenance and gathering of the best data to remain current and accurate over time. The Town will use available tools and resources from FEMA and other sources to integrate climate adaptation planning such as FEMA's "Climate Adaptation Planning: Guidance for Emergency Managers" document.	
Mitigation Category	<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	<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)
Priority	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
Alternatives:	Action	
	No Action	
	Do not reach minimum State standards	
	Adopt building code without integrating hazard mitigation principles	
	Evaluation	
	Current problem exists	
	Will be below standards	
	Will not increase Town's resiliency	



Action 2025-MachiasT-08. Floodprone Roads

Lead Agency:	Engineering		
Supporting Agencies:	Code Enforcement, Highway Department		
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	Flood prone roads not only interrupt the movement of persons and goods but can lead to isolation issues where first responders are unable to reach their destination and cause evacuation routes to be inaccessible. Flooded road ways may be caused by debris in culverts from severe storms and severe winter storms. There are multiple roads in Town which may benefit from flood mitigation strategies, such as the elevation of the roadways or the hardening of the infrastructure surrounding them to reduce likelihood of flooding.		
Description of the Solution:	The Town will develop specific mitigation solutions for flood-prone road systems after conducting a flood study. Possible solutions may include: <ul style="list-style-type: none"> • Elevation of roadways • Installation or improvement of drainage systems • Regrading of roadway and soils • Resurfacing or reshaping roadways 		
Estimated Cost:	TBD after mitigation technique is chosen		
Potential Funding Sources:	FEMA HMA, Town Budget, CHIPS		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.		
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
Impact on Critical Facilities/Lifelines:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.		
Impact on Capabilities:	This action improves the Town's reliability in terms of transportation.		
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action		Evaluation
	No Action		Current problem exists
	Relocate all flood-prone road system		Not feasible
	Raise all flood prone roads		Cost prohibitive



Action 2025-MachiasT-09. Substantial Damage Management Plan

Lead Agency:	Highway Department		
Supporting Agencies:	Code Enforcement, Town Board		
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire		
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 Town 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 Town is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.</p>		
Description of the Solution:	<p>The Town 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>		
Estimated Cost:	Low		
Potential Funding Sources:	Town Budget		
Implementation Timeline:	Within 3 years		
Goals Met:	1, 2, 4		
Benefits:	This action will provide a guidance document to determine substantial damage in the Town.		
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may disproportionately be impacted by substantial damages.		
Impact on Future Development:	Not applicable		
Impact on Critical Facilities/Lifelines:	Not applicable		
Impact on Capabilities:	This action will produce substantial damage guidance for Town officials to use.		
Climate Change Considerations:	Climate change is leading to an increase in frequency and intensity of precipitation events, which also increases flooding and may lead to a main failure.		
Mitigation Category	<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	<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)		
Priority	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low		
Alternatives:	Action		Evaluation
	No Action		Current problem exists
	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 2025-MachiasT-10. Landslide Mitigation

Lead Agency:	Engineering	
Supporting Agencies:	Highway Department	
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input checked="" type="checkbox"/> Wildfire
Description of the Problem:	Landslide events are often driven by hazards such as heavy rain events, flooding, heavy snowmelt, and wildfires. Landslides can destroy the natural and built environments, causing detriment to the structures in its path. Landslides may be able to be mitigated by cutting banks to prevent erosion. The Town has many steep sloped areas throughout its jurisdiction and should determine local vulnerabilities to landslides threatening primary roadways and properties.	
Description of the Solution:	<p>The Town Engineer will complete an assessment to identify an appropriate, cost-effective method to mitigation landslide risk within primary roads throughout the Town. Possible mitigation measures include:</p> <ul style="list-style-type: none"> • Construction of retaining walls, soil nailing, ground anchor walls • Install horizontal drains to reduce soil saturation • Cut banks along water ways to prevent oversaturated soils from falling • Install netting 	
Estimated Cost:	TBD after mitigation technique is chosen	
Potential Funding Sources:	FEMA HMA, Town Budget, CHIPS	
Implementation Timeline:	Within 5 years	
Goals Met:	1	
Benefits:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by landslide along Town roads. Keeping the roadway open to traffic also permits vulnerable populations to travel to critical appointments.	
Impact on Future Development:	Future development in the impacted area will be less likely to be impacted by landslides.	
Impact on Critical Facilities/Lifelines:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.	
Impact on Capabilities:	This action improves the Town's reliability in terms of transportation.	
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. Saturated soils can lead to an increased possibility of landslide occurrences. Conversely, drier summer conditions may fuel wildfires, leading to unstable soils and resulting in landslide occurrences.	
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
CRS Category	<input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
Alternatives:	Action	
	No Action	
	Reconstruct roadways outside of hazard area	
	Close roads and reroute traffic around hazard area	
		Evaluation
		Current problem exists
		Not feasible
		Not feasible, would cause confusion amongst travelers



Action 2025-MachiasT-11. Ischua Creek Watershed Dam #1 Rehab

Lead Agency:	County of Cattaraugus
Supporting Agencies:	County Engineer, County OES, NYDEC, Municipal Engineer
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam and Levee Failure <input type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire
Description of the Problem:	Ischua Creek Watershed Dam #1 is a Class I High Hazard Dam that is located on the Ischua Creek. The dam is owned by the County of Cattaraugus. Failure of the dam could result in inundation of residential properties, woodland areas, agricultural and rural lands, and transportation routes including Maple Avenue. Although the dam was last inspected in 2022, the risk of dam failure warrants an engineering evaluation to determine if retrofits of the dam would result in safer conditions.
Description of the Solution:	<p>The Municipal Engineer will work with the County of Cattaraugus to complete an updated engineering study of Ischua Creek Watershed Dam #1. The existing dam assessment report, completed in February 2013, indicates the following actions should be considered to reduce the risk of dam failure:</p> <ul style="list-style-type: none"> • A licensed engineer should be procured to produce the following: <ul style="list-style-type: none"> • Update the hydraulics to the most recent DEC standards • Update the structural calculations, including seismic, to the most recent DEC standards. • More urgent repairs include: <ul style="list-style-type: none"> • The vegetation within the spillway channel shall be cleared. • Debris shall be removed from the riser inlet. • Grass shall be planted at the toe of the dam where it has been damaged by wet conditions. • Additional measures which require attention by the County are as follows: <ul style="list-style-type: none"> • Embankments, Spillway & Crest should be mowed. • Dead vegetation on upstream embankment should be removed • Reservoir drains should be continuously maintained. • Replace dislodged rip-rap in the outlet channel. • Update the Emergency Action Plan (EAP) on an annual basis <p>The Town will also request information and input from its Highway department and the County regarding impacted roadways. If cost-effective mitigation measures or retrofit options are identified that can increase the level of safety and length of useful life, the Town and the County of Cattaraugus will pursue funding support, permit approval from NYSDEC, and implement the cost-effective measures.</p>
Estimated Cost:	High
Potential Funding Sources:	FEMA HMA, HHPD
Implementation Timeline:	Within 5 years
Goals Met:	1, 2, 3, 4, 6, 7
Benefits:	This action will improve the safety and security of those who live within the dam inundation areas of the dams and increase the resilience of responding agencies.
Impact on Socially Vulnerable Populations:	The action will result in better preparedness within the Special Flood Hazard Area and inundation areas where significant risk to socially vulnerable populations exists.
Impact on Future Development:	Future development located in or near the dam inundation area will be further protected from a dam failure event.
Impact on Critical Facilities/Lifelines:	Dams are considered a critical facility. This action will create an understanding of the safety procedures in place for each identified dam and strengthen the structural integrity of dam, as needed.
Impact on Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.



Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events, which may contribute to the likelihood of a dam failure event due to projected increases in precipitation. This action will increase the capabilities to respond to these events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No Action	Current problem exists	
	Decommission Dam	High cost, flood risk for nearby infrastructure, loss an environmental, flood control, and stormwater management resource.	
	Elevate nearby structures	High cost and likely not feasible for commercial properties. Will not reduce potential for dam failure due to poor dam conditions	



Action 2025-MachiasT-12. Bridge Evaluations

Lead Agency:	Highway Department		
Supporting Agencies:	Cattaraugus County Engineering, Cattaraugus County Public Works, NYS DOT		
Hazard(s) of Concern:	<input type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	<p>Scour on bridges can develop due to erosion. Erosion may occur due to waters impacting the bridge's structure during severe winter storms and severe storms when the precipitation causes the water movements to be more erratic. Rising waters may cause flooding conditions to further erode the structure of the bridge. The following bridges in the jurisdiction should be evaluated to determine useability and to identify potential solutions, as necessary:</p> <ul style="list-style-type: none"> • Machias 23 • Machias 28 		
Description of the Solution:	<p>The Highway Department will work with Cattaraugus County Engineering and Public Works to evaluate each bridge to determine its current usability. The evaluation will indicate whether the County will need to replace or retrofit the identified bridges and causeways. This evaluation should be performed in partnership and/or with feedback from NYS DOT as necessary.</p>		
Estimated Cost:	Medium		
Potential Funding Sources:	FEMA HMA, County Budget, BRIDGENY		
Implementation Timeline:	Within 5 years		
Goals Met:	1		
Benefits:	This action will ensure the bridges in the jurisdiction are structurally sound to continue in operation.		
Impact on Socially Vulnerable Populations:	Not applicable		
Impact on Future Development:	Not applicable		
Impact on Critical Facilities/Lifelines:	This action will ensure transportation routes remain open and accessible to the public for daily use and evacuation needs; the bridges provide a point of access for first responders into communities that may have faced damage from a hazard event on either side of the bridges.		
Impact on Capabilities:	Not applicable		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action will work to ensure the structure of the bridges are impervious to erosion at their base due to rising water levels.		
Mitigation Category	<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	<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)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action		Evaluation
	No Action		Current problem exists
	Remove bridges		May cause significant traffic problems
	Replace bridges		Cost prohibitive



Action 2025-MachiasT-13. Federal Accreditation Standards

Lead Agency:	Municipal Engineer	
Supporting Agencies:	Cattaraugus County Public Works, FEMA, USACE, Dam Owners, Levee Owners	
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam and Levee Failure <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Pandemic	<input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire
Description of the Problem:	Federal accreditation of floodwater retention structures shows the dams and levees have met and continue to meet the minimum regulatory standards set by the regulatory agencies. The accreditation of these structures show they are able to support efforts in the mitigation of flood risk.	
Description of the Solution:	The Town will partner with Cattaraugus County to assist with communications to dam and levee owners and operators. Communication with dam and levee owners and/or operators will be focused on ensuring the structure(s) are accredited and/or how to get the structure(s) accredited.	
Estimated Cost:	Low	
Potential Funding Sources:	County Budget, Jurisdictional Budget, Dam Owners, Levee Owners	
Implementation Timeline:	4 years	
Goals Met:	1, 2, 4, 6, 7	
Benefits:	Federal accreditation of floodwater retention structures shows the dams and levees have met and continue to meet the minimum regulatory standards set by the regulatory agencies. The accreditation of these structures show they can support efforts in the mitigation of flood risk.	
Impact on Socially Vulnerable Populations:	Accreditation of the structures show they can support efforts in the mitigation of flood risk, including impacts on the populations, and their property, near the structures.	
Impact on Future Development:	Accreditation of the structures show they can support efforts in the mitigation of flood risk. Future development near the structures will have reduced risk to the flood hazard.	
Impact on Critical Facilities/Lifelines:	Accreditation of the structures show they can support efforts in the mitigation of flood risk. Critical facilities near the structures will have reduced risk to the flood hazard. Dams and levees are critical facilities. Accredited structures meet the minimum regulatory standards set by the regulatory agencies.	
Impact on Capabilities:	This action will strengthen flood risk reduction capabilities. Having an accredited structure means they can support efforts in mitigating the risk of the flood hazard.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events, including heavy rainfalls and flooding events. Heavy rainfalls can cause additional pressure and stress on dams and levees, leading to failure. Federal accreditation of floodwater retention structures shows the dams and levees have met and continue to meet the minimum regulatory standards set by the regulatory agencies.	
Mitigation Category	<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	<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)
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium
Alternatives:	<input type="checkbox"/> Low	
	Action	Evaluation
	No Action	Current problem exists
	Only work to ensure dam accreditation	Levees may not be accredited
Only work to ensure levee accreditation	Dams may not be accredited	