



33. TOWN OF OLEAN

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

33.1 HAZARD MITIGATION PLANNING TEAM

The Town of Olean 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 33-1 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 33-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Patrick Zink, Highway Superintendent Address: 1948 Godfrey Hollow Rd, Olean, NY 14760 Phone Number: (716) 372-1060 Email: townofoleanhighway@gmail.com	Name/Title: Annette M Parker, Supervisor Address: 2634 RT 16 North, Olean, NY 14760 Phone Number: (716) 373-0582 Email: oleantownsupervisor@gmail.com
National Flood Insurance Program Floodplain Administrator	
Name/Title: Jerry Dzuroff, Code Enforcement Officer Address: 2634 RT 16 North, Olean, NY 14760 Phone Number: (716) 373-0582 Email: gdzuroff@roadrunner.com	
Additional Contributors	
Name/Title: Patrick Zink, Highway Superintendent Method of Participation: Provided key input in the planning process and completed worksheets	
Name/Title: Jerry Dzuroff, Code Enforcement Officer Method of Participation: Provided key input in the planning process and completed worksheets	

33.2 COMMUNITY PROFILE

The Town of Olean lies on the southeast border of Cattaraugus County in western New York State. The Town of Olean has a total area of 29.7 square miles. The Allegheny River flows west through the town. The town is bordered to the north by the Town of Hinsdale, to the west is the Town of Allegany, and to the east is the Town of Portville. According to the U.S. Census, the 2020 population for Olean was 1,881.



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 2.9 percent of the population is 5 years of age or younger, 26.1 percent is 65 years of age or older, zero percent is non-English speaking, 13.9 percent is below the poverty threshold, and 17.1 percent is considered disabled.

33.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

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

33.3.1 Planning and Regulatory Capability and Integration

Table 33-2 summarizes the planning and regulatory tools that are available to Olean.

Table 33-2. 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 3, 2023: NYS Uniform Fire and Building Code	State and Local	Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk? Code applies to construction, alteration, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.				
Zoning/Land Use Code	Yes	Zoning Law, 2000	Local	Code Enforcement
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
<p>For the purposes of promoting the public health, safety, and welfare; conserving and protecting property and property values; securing the most appropriate use of land; lessening or avoiding congestion in the public streets and highways; securing safety from fire, flood, panic, and other dangers; providing adequate light and air; preventing the overcrowding of land and avoiding undue concentration of people; facilitating the practice of forestry; facilitating the adequate but economical provision of public improvements; and minimizing flood losses in areas subject to periodic inundation the Town Board of the Town of Mansfield finds it necessary and advisable to regulate the location, size, and use of buildings and other structures and the use of land for trade, industry, residencies, recreation, or other purposes and for such purposes divides the unincorporated area of the Town into districts or zones.</p>				
Subdivision Code	Yes	Zoning Law, 2000	Local	Code Enforcement
<p>How has or will this be integrated with the HMP and how does this reduce risk? Empowers local authoritative body to approve plats showing lots, blocks or sites, with or without streets or highways, to approve the development of entirely or partially undeveloped plats already filed and to approve preliminary plats within jurisdictional boundaries. This ensures that all approved plats for land development fall within local rules and regulations for environmental preservation, building code standards and wildfire protection ordinances.</p>				
Site Plan Code	Yes	Zoning Law, 2000; Article 10: Site Plan Review	Local	Planning Board
<p>How has or will this be integrated with the HMP and how does this reduce risk? The purpose of this article if to ensure that any new development or substantial redevelopment in the Town of Olean is in harmony with the character of the Town and that such development meets the guidelines establish ed in the Town's Comprehensive Master Plan and Rural Development Policies. An additional purpose is to minimize conflicts between future development and neighboring existing uses and natural features of the site; this will minimize any potential adverse effects to the health, safety, and general welfare of the residents of the Town of Olean.</p>				
Stormwater Management Code	Yes	Zoning Law, 2000; Article 9, Section 9.13 Stormwater Management and Erosion Control	Local	Code Enforcement
<p>How has or will this be integrated with the HMP and how does this reduce risk? The intent and purpose of this section is to protect, maintain, and enhance both the immediate and long-term health, safety, and welfare of the residents of the Town of Olean. In order to achieve these goals, this sections has the following objectives:</p> <ol style="list-style-type: none"> (1) To prevent increases in the magnitude and frequency of stormwater runoff, so as to prevent an increase in flood flows and in the hazards and costs associated with flooding, (2) To maintain the integrity of stream geometry so as to sustain the hydrologic functions of streams, and (3) To control erosion and sedimentation so as to prevent its deposition in streams and other receiving bodies. 				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
<p>How has or will this be integrated with the HMP and how does this reduce risk?</p>				
Real Estate Disclosure Requirements	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
<p>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.</p>				
Growth Management	No	-	-	-
<p>How has or will this be integrated with the HMP and how does this reduce risk?</p>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Environmental Protection Ordinance(s)	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Flood Damage Prevention Ordinance	Yes	Local Law 1, 2000: Flood Damage Prevention	Local	Town Supervisor
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.				
Wellhead Protection	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Emergency Management Ordinance	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Climate Change Ordinance	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
PLANNING DOCUMENTS				
General/Comprehensive Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Capital Improvement Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Disaster Debris Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Floodplain Management or Watershed Plan	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
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	-	-	-
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?	No	-	-	-
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	-	-	-



	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
RESPONSE/RECOVERY PLANNING				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan (CEMP)	County	OES
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 County. 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.				
Continuity of Operations Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
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	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Public Health Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				

33.3.2 Development and Permitting Capability

Table 33-3 summarizes the capabilities of Olean to oversee and track development.

Table 33-3. 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.)	Yes	Floodplain



	Yes/No	Comment
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	50% buildable

33.3.3 Administrative and Technical Capability

Table 33-4 summarizes potential staff and personnel resources available to Olean and their current responsibilities that contribute to hazard mitigation.

Table 33-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
ADMINISTRATIVE CAPABILITY		
Planning Board	Yes	The Planning Board makes recommendations to the Town Board regulations relating to any subject matter over which the Planning Board has jurisdiction; reviews and makes recommendations on any proposed Town comprehensive plan or amendments; has the authority to make investigations, maps, reports and recommendations relating to the planning and development of the Town; reviews all applications for special use permits, site plan review, master plan developments and amendments to the zoning ordinance; reviews all applications for subdivisions under the provisions of the Town subdivision regulations; has the authority to review and make recommendations on any other matters referred to it by the Town Board.
Zoning Board of Adjustment	Yes	With due consideration for the purpose and intent of this Zoning Law, and without limiting the powers with which the Board is vested by Section 267 of NYS Town Law, the Zoning Board of Appeals shall have the power and authority to hear and determine appeals from and review any order, requirement, decision or determination made by the Code Enforcement Officer charged with the enforcement of this Code. The Board may reverse or affirm, wholly or partly, or may modify the order, requirement, decision, interpretation or determination appealed from and may make such order, requirement, decision, or determination as ought to be made and to that end shall have all the powers of the Code Enforcement Officer; hold a public hearing and approve or deny each application for a use or area variance; revoke any decision to grant a variance after a public hearing, if the owner/applicant fails to comply with any conditions of approval of the original application.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-



Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
Economic Development Commission/Committee	Yes	Town Board
Public Works/Highway Department	Yes	Highway Department: <ul style="list-style-type: none"> • Maintain 33 miles of road • Plow snow • Mow and trim grass, weeds, and brush • Maintain and repair equipment and vehicles • Maintain road signs • Assist other agencies during natural disasters • Maintain and clean roadside ditches • Maintain drainage and culvert pipes • Pave, patch, and resurface roadways • Removed downed trees • Maintain guiderails • Assist other municipalities through shared services
Construction/Building/Code Enforcement Department	Yes	Code Enforcement enforces the construction code and issues permits.
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Fire Departments/Town Board
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	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	Yes	Code Enforcement
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	-



Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
Surveyors	Yes	Code Enforcement performs site inspections. In terms of land surveying, the Town does not have this capability.
Emergency manager	No	-
Grant writers	Yes	Municipal Solutions
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

33.3.4 Fiscal Capability

Table 33-5 summarizes financial resources available to Olean.

Table 33-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvement project funding	No
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
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	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Yes

33.3.5 Education and Outreach Capability

Table 33-6 summarizes the education and outreach resources available to Olean.

Table 33-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	Yes	Town Supervisor
Personnel skilled or trained in website development	Yes	Southern Tier West
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-



Outreach Resources	Available? (Yes/No)	Comment
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Local Fire Department
Natural disaster/safety programs in place for schools	Yes	Fire and Severe Storm programs
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	-

33.3.6 Community Classifications

Table 33-7 summarizes classifications for community programs available to Olean.

Table 33-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Unknown	Unknown
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

33.3.7 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 33-8 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 33-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam and Levee Failure	Moderate



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

33.4 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 33-1 is responsible for maintaining this information.

33.4.1 NFIP Statistics

Table 33-9 summarizes the NFIP policy and claim statistics for Olean.

Table 33-9. Olean NFIP Summary of Policy and Claim Statistics

# Policies	18
# Claims (Losses)	26
Total Loss Payments	\$329,532.00
# Repetitive Loss Properties (NFIP definition)	3
# 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

33.4.2 Flood Vulnerability Summary

Table 33-10 provides a summary of the NFIP program in Olean.



Table 33-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	River Basin (East and West River Rd) Watershed areas Flood plains
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	None
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Site visits and repair estimates after events
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Zero declared
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Code Enforcement
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes, the County has a GIS department capable of analyzing future flooding conditions.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, training and funding is needed.
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?	Building permits. Construction costs
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: April 17, 1998 CAV: September 8, 2011



NFIP Topic	Comments
What is the local law number or municipal code of your flood damage prevention ordinance?	Local Law 1, 2000: Flood Damage Prevention
What is the date that your flood damage prevention ordinance was last amended?	February 8, 2000
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	Meets
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and 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?	Yes. Site Plan Review
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

33.5 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 33-11 through Table 33-13.

Table 33-11. 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	4	0	0	4
Permits within SFHA	0	0	0	0
2020				
Total Permits	2	0	1	3
Permits within SFHA	0	0	0	0
2021				
Total Permits	3	0	1	4
Permits within SFHA	0	0	0	0
2022				
Total Permits	1	0	0	1
Permits within SFHA	0	0	0	0
2023				
Total Permits	2	0	0	2
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 33-12. 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 33-13. 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
Wind Farm	Industrial	1	Unknown	None	Leases being acquired but construction not started
Solar Farms	Industrial	3	Unknown	None	Application process begun but construction not started

33.6 JURISDICTIONAL RISK ASSESSMENT

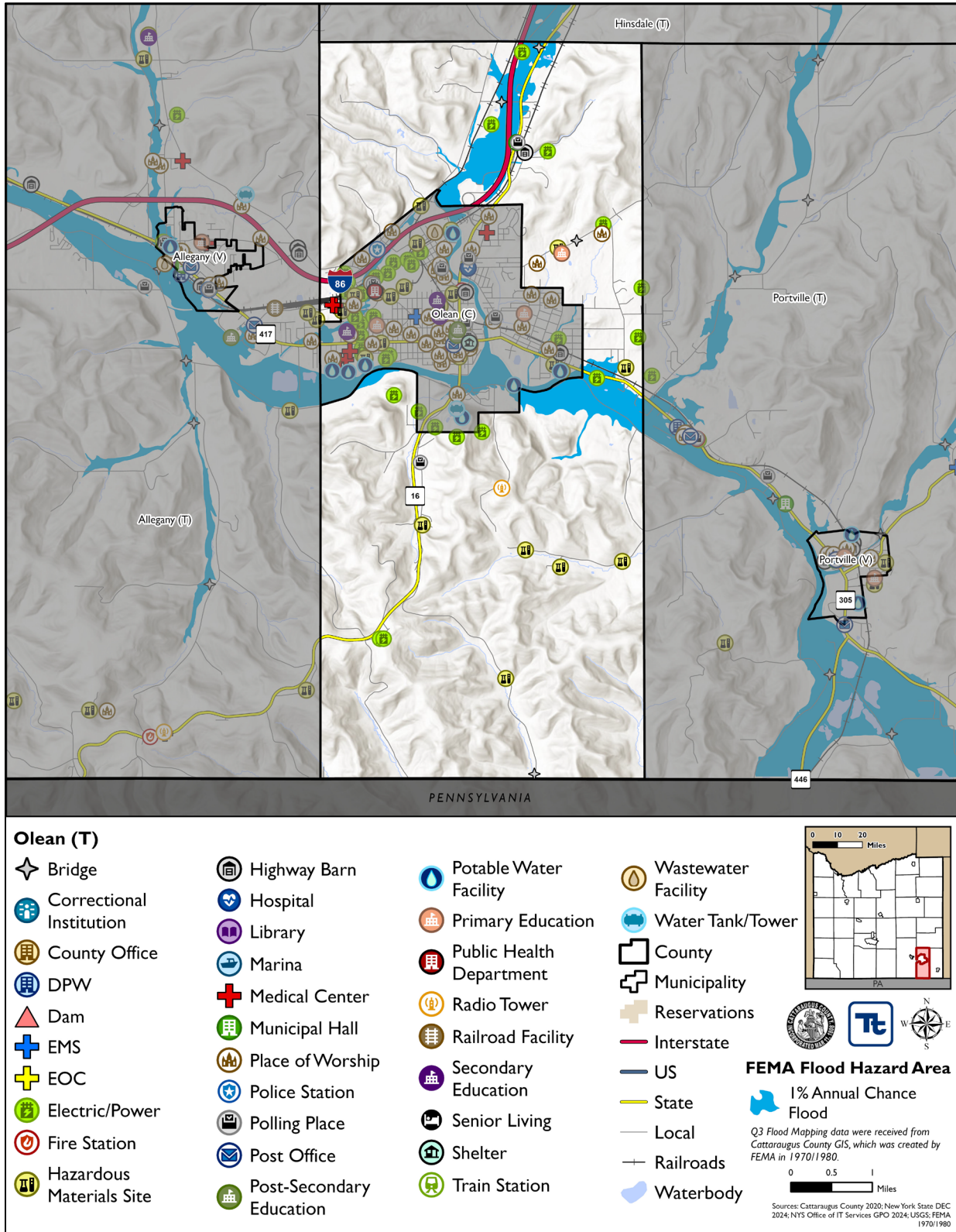
The hazard profiles in Volume I provide detailed information regarding each planning partner’s vulnerability to the identified hazards, including summaries of Olean’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

33.6.1 Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Town are shown in Figure 33-1 through Figure 33-2. 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 Olean has significant exposure. The maps show the location of potential new development, where available.



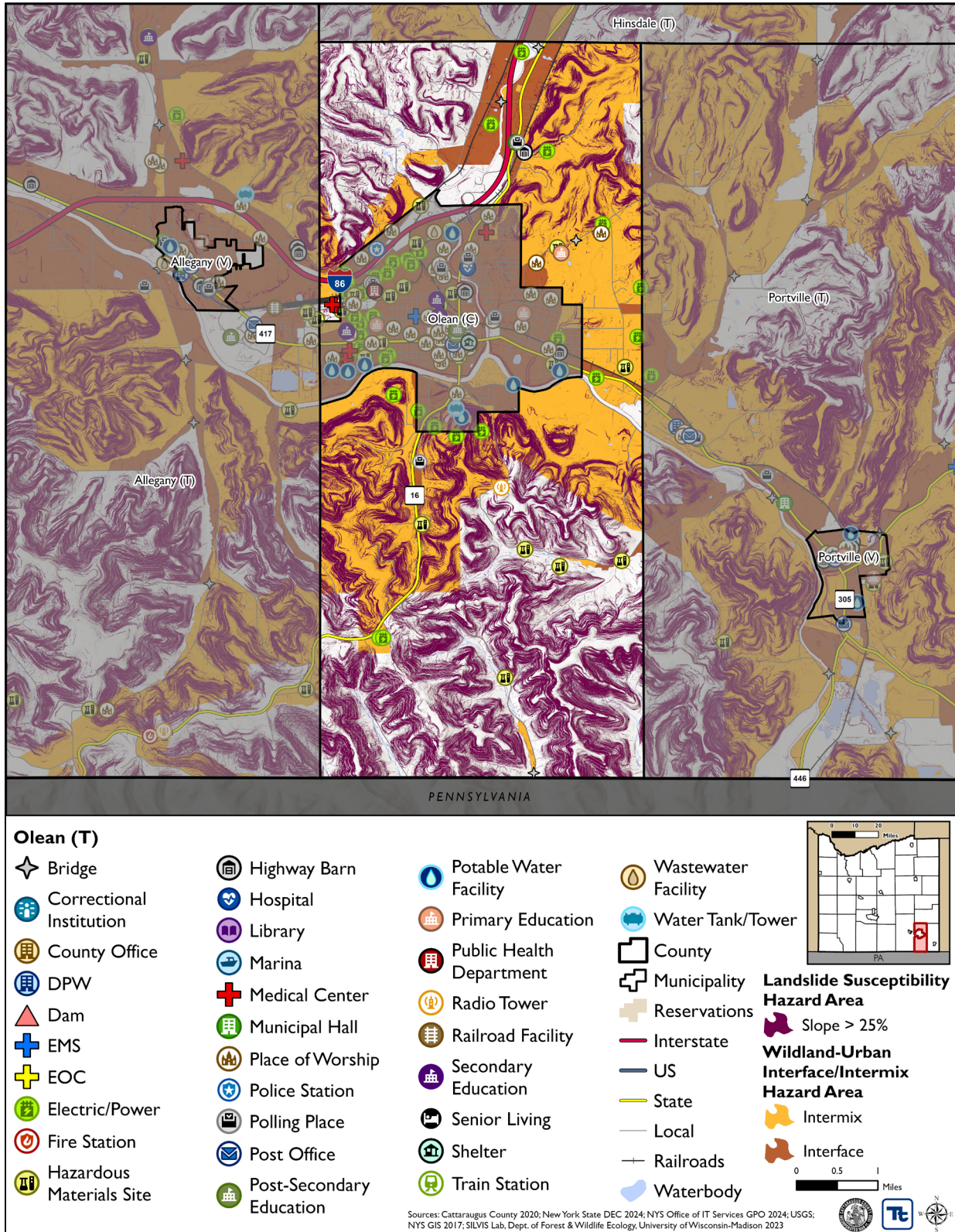
Figure 33-1. Olean Flood Hazard Area Extent and Location Map



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 33-2. Olean Wildfire Hazard Area Extent and Location Map





33.6.2 Hazard Event History

The history of natural and non-natural hazard events in Olean is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 33-14 provides details on loss and damage in Olean during hazard events since the last hazard mitigation plan update.

Table 33-14. Hazard Event History in Olean

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Olean
October 31- November 1, 2019	DR-4472	No	Severe Storms, Straight-Line Winds, and Flooding	The Town experienced roadside washouts along McCann Hollow Road, Oregon Road, and Steam Valley Road.
March 13, 2020	EM-3434 DR-4480	Yes	COVID-19 Pandemic	The Town Highway Dept. Staff worked with minimal staff on a rotating every other week schedule. Only basic services provided due to minimal staffing.
January 12, 2020	High Wind	N/A	High wind	The Town did not experience any documented damages or losses.
July 16, 2020	Thunderstorm Wind	N/A	Trees and wires were reported down in Gowanda.	The Town did not experience 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 experienced roadside washouts and flooding along Back Hinsdale Road, Oregon Road, and Steam Valley Road.
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 did not experience any documented damages or losses.
September 7, 2020	Thunderstorm Wind	N/A	Property damage in Olean.	The Town experienced trees and power lines down along McDuffy Road.
November 15, 2020	High Wind	N/A	Property damage throughout Cattaraugus County.	The Town did not experience 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 experience any documented damages or losses.



Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Olean
December 11, 2021	High Wind	N/A	Dozens of reports of trees and powerlines down were received.	The Town did not experience any documented damages or losses.
February 18, 2022	Heavy Rain, Flooding	N/A	Multiple roadside washouts and water on roadways from excessive snow melt and rain	The Town experienced roadside washouts and flooding along Indiana Avenue, Steam Valley Road, Mueller Road, McCann Hollow Road, and Godfrey Hollow Road.
March 6, 2022	High Wind	N/A	High wind	The Town did not experience 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 experience any documented damages or losses.
November 20, 2022	EM-3589	Yes	Severe Winter Storm and Snowstorm	The Town did not experience any documented damages or losses.

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

33.6.3 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 Olean.

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. Olean 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 hazard ranking was accurate.

Table 33-15 shows Olean’s final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.



Table 33-15. Hazard Ranking

Hazard	Rank
Dam and Levee Failure	Low
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 33-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 33-16. 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		
National Fuel Gas Dist	Electric/Power	X	-	2025-OleanT-03	-
Niagara Mohawk Power Corp	Electric/Power	X	-	2025-OleanT-03	-
Olean 12	Bridge	X	-	2025-OleanT-12	-
Olean 20	Bridge	X	-	2025-OleanT-12	-

Source: Cattaraugus County 2024

33.6.4 Identified Issues

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

- Undersized culverts often result in the flooding of roadways due to the inability to handle the influx of water. Debris build-up in these undersized pipes may also result in water back-flow, leading to further roadway flooding instances and impacting the integrity of the culverts. Several culverts in the Town are undersized or have been damaged from instances of flooding and the debris caused by severe storms and severe winter winters including culverts located on the following roads:
 - Valley View Road
 - East River Road
 - Godfrey Hollow Road
 - McCann Hollow Road
 - Blakeslee Hollow Road



- 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 including:
 - Oakes Road
 - Shott Avenue
 - Fairview Avenue
 - Hastings Road
 - Route 16 North
 - Route 417 East
 - East River Road
 - West River Road
- The following critical facilities are located in the special flood hazard area and may have an increased risk to flooding impacts:
 - National Fuel Gas District
 - Niagara Mohawk Power Corp
- The Town Hall, Highway Garage, and Fire Department located in the Town do not have back up power, which could impact the continuity of operations at the facilities in the event of a utility or power failure. High winds associated with severe storms and severe winter storms are known to cause utility failures, which would impact the continuity of operations at both critical facilities. Rising water levels from floods could impact these facilities; back-up generators would permit any influx of water to be removed from the facilities via pumping systems.
- 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. Landslide conditions exist along Stream Valley Road and Indiana Avenue. Landslides may be able to be mitigated by cutting banks to prevent erosion.
- 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.
- 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.
- Frequent flooding events have resulted in damages to residential properties. 40 properties along East and West River Roads are exposed to flooding and the Town has three repetitive loss properties, but other properties may be impacted by flooding as well.



- The Town does not have a Comprehensive Emergency Management Plan (CEMP). Hazard mitigation principles need to be integrated into the CEMP. A CEMP establishes the overall authority, roles, and functions performed during incidents. Incorporating hazard mitigation principles into a CEMP ensures hazard risk is identified.
- Roads in the Town have been eroded due to floodwaters stemming from severe storms and melted snow from 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 including:
 - Godfrey Hollow Road
 - McCann Hollow Road
 - Steam Valley Road
 - Oregon Road
 - Indiana Avenue
 - Mueller Road
- 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:
 - Olean 12
 - Olean 20
- 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.

33.7 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.

33.7.1 Past Mitigation Action Status

Table 33-17 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.

33.7.2 Additional Mitigation Efforts

In addition to the mitigation actions completed in Table 33-17, Olean identified the following mitigation efforts completed since the last HMP:

- A large box culvert was replaced in 2023 at the intersection of Hastings Road and Back Hinsdale Road. Culvert project was funded with a Bridge NY grant awarded in 2018.



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

- Stormwater management



Table 33-17. 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-Town of Olean-001	Replace culverts in the Town of Olean on Back Hinsdale/Valley View, East River Rd at or near 1998, 1754, and 1700, Godfrey Hollow Rd, McCann Hollow Rd, and Blakeslee Hollow Rd.	Flood, Severe Storm	Engineer, Highway Department	<p>Problem: Culverts in the town are outdated and undersized and needs to be replaced along Back Hinsdale/Valley View, East River Rd, Godfrey Hollow Rd, McCann Hollow Rd, and Blakeslee Hollow Rd.</p> <p>Solution: The town will replace and upsize the repetitively damaged/undersized culverts, following an engineering study to determine the appropriate size upgrades.</p>	<p>1. In Progress</p> <p>2. A large box culvert was replaced in 2023 at the intersection of Hastings Road and Back Hinsdale Road. Culvert project was funded with a Bridge NY grant awarded in 2018. Godfrey Hollow Culvert has been funded with a Bridge NY grant. Anticipated construction to begin in 2026. Preliminary work on the project has commenced.</p>	<p>1. Include</p> <p>2. Not applicable</p> <p>3. Not applicable</p>
2020-Town of Olean-002	Protect the National Fuel Gas District to the 0.2% annual chance flood event.	Flood	FPA	<p>Problem: The National Fuel Gas District is in the special flood hazard area and vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood event.</p> <p>Solution: the FPA will contact the facility manger to discuss the facilities flood exposure and possible mitigation actions to protect the facility to the 0.2% annual chance flood event.</p>	<p>1. No Progress</p> <p>2. Town focused on other priority projects.</p>	<p>1. Include</p> <p>2. Update to include any additional critical facilities.</p> <p>3. Not applicable</p>
2020-Town of Olean-003	Generator for Town Hall and Highway Garage	All Hazards	Town Board, Engineer	<p>Problem: Backup power sources are necessary to maintain critical services for critical facilities. Town Hall and Highway Garage lack a permanent power source. The Town Hall location houses the Town Hall, Court, and</p>	<p>1. No Progress</p> <p>2. Funding has limited progress on this action.</p>	<p>1. Include</p> <p>2. Consolidate back-up generator actions.</p> <p>3. Not applicable</p>



Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 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.
				<p>Clerk. The Highway Garage houses highway equipment and vehicles.</p> <p>Solution: The Town Engineer will research what size generator is necessary to supply backup power to the Town Hall and Highway Garage. The town will then install a backup power generator and necessary electrical components.</p>		
2020-Town of Olean-004	Landslide study along Stream Valley and Old Rock City Road	Landslide	Engineer	<p>Problem: Landslide conditions exist along Stream Valley.</p> <p>Solution: Conduct landslide study to determine landside risk and potential mitigation actions.</p>	<p>1. No Progress 2. Funding has limited progress on this action.</p>	<p>1. Include 2. Not applicable 3. Not applicable</p>
2020-Town of Olean-005	Generator for Town of Olean Fire Department	All Hazards	Engineer, OEM, Fire Department	<p>Problem: Backup power sources are necessary to maintain critical services for critical facilities. Fire Department lacks a permanent power source. The Fire Department houses the firefighters and fire trucks.</p> <p>Solution: The Town Engineer will research what size generator is necessary to supply backup power to the Fire Department. The town will then install a backup power generator and necessary electrical components.</p>	<p>1. No Progress 2. Funding has limited progress on this action.</p>	<p>1. Include 2. Consolidate back-up generator actions. 3. Not applicable</p>
2020-Town of Olean-006	Steam Valley access	Flood, Severe Storm	Soil and Water Conservation District, Engineer	<p>Problem: Steam Valley Road has limited access during flooding. Roads are prone to washout during heavy rain events.</p>	<p>1. No Progress 2. Other Town priorities have resulted in no progress on this action.</p>	<p>1. Include 2. Combine with other flood prone road actions 3. Not applicable</p>



Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Solution: Conduct an engineering study to determine the best action to mitigate flooding and allow road access during flooding. Carry out the identified action.		
2020-Town of Olean-007	Update Flood Damage Prevention Ordinance	Flood	Town board	Problem: The town lacks and updated flood damage prevention ordinance. Solution: The town will develop an updated flood damage prevention ordinance.	1. No Progress 2. Other Town priorities have resulted in no progress on this action.	1. Include 2. Not applicable 3. Not applicable
2020-Town of Olean-008	Floodplain Administrator to attend training on floodplain management	Flood	Cattaraugus County Emergency Management/ Cattaraugus County Codes Department	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. Other Town priorities have resulted in no progress on this action.	1. Include 2. Not applicable 3. Not applicable
2020-Town of Olean-009	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. Other Town priorities have resulted in no progress on this action.	1. Include 2. Change to outreach program for all hazards. 3. Not applicable
2020-Town of	Relocation or elevation of Town Hall	Flood, Severe Storm	Town Board, FPA, Engineer	Problem: Town Hall located at 2634 Rt 16 is in the floodplain and exposed to flooding. Town Hall is a critical	1. Completed	1. Discontinue 2. 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.
Olean-010				<p>facility and needs to be protected to the 0.2% annual chance flood event.</p> <p>Solution: Conduct an engineering study to determine best action (relocation or elevation) to protect Town Hall from flooding.</p>	2. Facility was not identified as being located in the flood hazard area.	3. Facility was not identified as being located in the flood hazard area.
2020-Town of Olean-011	Relocation or elevation of properties along East and West River Rd	Flood, Severe Storm	FPA	<p>Problem: 40 properties along East and West River Roads are exposed to flooding.</p> <p>Solution: Conduct an Engineering Study to determine best action (elevation or relocation) of properties to protect them from flooding. Work with property owners to implement the selected actions.</p>	<p>1. No Progress</p> <p>2. Other Town priorities have resulted in no progress on this action.</p>	<p>1. Include</p> <p>2. Not applicable</p> <p>3. Not applicable</p>
2020-Town of Olean-012	Trim tree limbs away from buildings and structures.	Storms (Ice, winter, severe), tornadoes	Municipalities and Hwy Dept	<p>Problem: The town does not have a tree trimming program in place. It is unknown the safety of trees throughout the town. During wind events or heavy snow, falling tree branches can damage utilities and private property.</p> <p>Solution: The town will develop a tree trimming maintenance program and remove trees that pose a threat to structures.</p>	<p>1. Completed</p> <p>2. The Town's Highway Department has this capability.</p>	<p>1. Discontinue</p> <p>2. Not applicable</p> <p>3. Existing capability</p>
2020-Town of Olean-013	Update the Emergency Operations Plan.	All Hazards	County, Town	Problem: The town has an outdated Emergency Operations Plan.	<p>1. No Progress</p> <p>2. Town indicated in capabilities it does not have a CEMP and utilizes the County's.</p>	<p>1. Include</p> <p>2. Change action to develop a CEMP</p> <p>3. Not applicable</p>



Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Solution: The town will update town's Emergency Operation Plan to include current hazards.		
2020-Town of Olean-014	Update Building Code	All Hazards	County, Town	<p>Problem: Building codes are outdated in the town.</p> <p>Solution: The town will update building codes, so buildings are built to withstand hazards they face.</p>	<p>1. Ongoing Capability</p> <p>2. Town codes are reviewed and updated on a scheduled basis</p>	<p>1. Discontinue</p> <p>2. Not applicable</p> <p>3. Town capability</p>
2020-Town of Olean-015	Erosion control of Godfrey Hollow Rd, McCann Hollow Rd, Steam Valley Rd, and Oregon Rd	Severe Storm, Flood	Highway Department	<p>Problem: Erosion of roadside ditches along Godfrey Hollow Rd, McCann Hollow Rd, Steam Valley Rd, and Oregon Rd due to heavy rain events.</p> <p>Solution: The town will place riprap along roadside ditches to hold soil and slow water back and prevent them from washing out roads.</p>	<p>1. No Progress</p> <p>2. Funding has limited progress on this action.</p>	<p>1. Include</p> <p>2. Not applicable</p> <p>3. Not applicable</p>



33.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Olean 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 Olean 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 33-18 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 33-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.



Table 33-18. 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
Flood	X	X		X	X		X		X	X
Landslide	X	X		X	X		X		X	X
Pandemic	X			X			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 33-19. 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-OleanT-01	Undersized Culverts	1	1	1	1	1	0	1	0	1	1	1	1	1	0	11	High
2025-OleanT-02	Floodprone Roads	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-OleanT-03	Critical Facility Protection	1	1	1	1	1	1	0	1	1	1	0	1	1	0	11	High
2025-OleanT-04	Generators at Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2025-OleanT-05	Landslide Mitigation	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-OleanT-06	Floodplain Management Training	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2025-OleanT-07	Flood Damage Prevention Ordinance Update	1	1	1	1	1	1	1	1	1	1	1	1	0	0	12	High
2025-OleanT-08	Comprehensive Outreach Program	1	1	1	1	1	1	0	1	1	1	1	1	0	1	12	High
2025-OleanT-09	Flood Impacted and Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	0	1	1	0	1	11	High
2025-OleanT-10	Develop a Comprehensive Emergency Management Plan	1	1	1	1	1	1	0	1	1	1	0	1	1	0	11	High
2025-OleanT-11	Road Erosion Mitigation	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-OleanT-12	Bridge Evaluations	1	1	1	1	0	0	1	1	1	1	1	1	1	0	11	High
2025-OleanT-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).



2025-OleanT-01. Undersized Culverts

Lead Agency:	Highway Superintendent		
Supporting Agencies:	Code Enforcement, Engineering		
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>Undersized culverts often result in the flooding of roadways due to the inability to handle the influx of water. Debris build-up in these undersized pipes may also result in water back-flow, leading to further roadway flooding instances and impacting the integrity of the culverts. Several culverts in the Town are undersized or have been damaged from instances of flooding and the debris caused by severe storms and severe winter winters including culverts located on the following roads:</p> <ul style="list-style-type: none"> • Valley View Road • East River Road • Godfrey Hollow Road • McCann Hollow Road • Blakeslee Hollow Road 		
Description of the Solution:	The Town Engineer will complete an engineering survey of the culverts located in Town that are undersized and contribute to flooding to determine the proper size necessary to provide stormwater capacity. The Town Highway Department will complete the necessary upsizing for the culverts.		
Estimated Cost:	TBD after study is complete		
Potential Funding Sources:	FEMA HMA, CHIPS, Town Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 4		
Benefits:	Overall flooding will be reduced, which will result in less frequency of road closures and reduced damage occurring to culverts and roadways during severe events. Businesses are likely to remain in place if they are able to remain open, or re-open sooner following a flood.		
Impact on Socially Vulnerable Populations:	Areas that were previously vulnerable to frequency or severe flooding events will be less likely to be impacted by flooding events.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
Impact on Critical Facilities/Lifelines:	Transportation routes are more likely to remain open. Evacuation routes will remain intact. Access to health and medical facilities will be maintained, both for healthcare workers and the population who requires treatment for injuries and illness.		
Impact on Capabilities:	Identifying the culverts that are at greatest risk of damage or failure can allow for resource staging to take place where the need is greatest ahead of a flood event.		
Climate Change Considerations:	Climate change is likely to result in more frequent and severe rainfall events. This action upsizes culvert sizes to meet changing stormwater needs as the result of climate change.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input 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 roadway		Roadway cannot be removed
	Raingardens		Raingardens are unlikely to be able to absorb enough stormwater to prevent flooding during severe rainfall events.



2025-OleanT-02. Floodprone Roads

Lead Agency:	Highway Department		
Supporting Agencies:	Building Code Enforcement, Engineering		
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 type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	<p>Flood prone roads not only interrupt the movement of persons and goods but can lead to isolation issues where first responders are unable to reach their destination and cause evacuation routes to be inaccessible. Flooded road ways may be caused by debris in culverts from severe storms and severe winter storms. There are multiple roads in 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 including:</p> <ul style="list-style-type: none"> • Oakes Road • Shott Avenue • Fairview Avenue • Hastings Road • Route 16 North • Route 417 East • East River Road • West River Road 		
Description of the Solution:	<p>The Town will develop specific mitigation solutions for flood-prone road systems after conducting a flood study. Possible solutions may include:</p> <ul style="list-style-type: none"> • Elevation of roadways • Installation or improvement of drainage systems • Regrading of roadway and soils • Resurfacing or reshaping roadways 		
Estimated Cost:	TBD after 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 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 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-OleanT-03. Critical Facility Protection

Lead Agency:	Critical Facility Owners and Managers		
Supporting Agencies:	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 type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	<p>The following critical facilities are located in the special flood hazard area and may have an increased risk to flooding impacts:</p> <ul style="list-style-type: none"> National Fuel Gas District Niagara Mohawk Power Corp 		
Description of the Solution:	<p>The Town will conduct a feasibility assessment to determine what additional floodproofing measures are needed at the critical facilities to protect them to the 500-year flood level. Options include:</p> <ul style="list-style-type: none"> Elevation of facility Floodproofing of facility Mobile flood barriers <p>Once the most cost-effective option is identified, the Town will carry out the option.</p>		
Estimated Cost:	Medium		
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, 3, 5		
Benefits:	Ensures continuity of operations of several critical facilities in the Town.		
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders and emergency managers to maintain critical services that socially vulnerable populations rely on.		
Impact on Future Development:	The risk of significant damage occurring to the structure will be reduced, which will allow critical operations to be maintained or only briefly interrupted in severe events. This provides continued support to both current and future development in the service area.		
Impact on Critical Facilities/Lifelines:	This action will protect critical facilities, maintaining the critical services that it provides.		
Impact on Capabilities:	This action improves continuity of operations during a flood event, allows for a more rapid return to pre-disaster capabilities after a flood event, and faster deployment of post disaster capabilities.		
Climate Change Considerations:	This action addresses anticipated increases in flooding frequency and severity through protection to the 500-year (0.2-percent annual chance) flood level.		
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 facility		Relocation is expensive and results in loss or delay of critical services in the immediate area
	Establish plans to enter into MOU with neighboring critical facilities to provide service during flood events		Reduction in response times and delay of critical services in the immediate area.



Action 2025-OleanT-04. Generators at Critical Facilities

Lead Agency:	Highway Department		
Supporting Agencies:	Town Board, Engineering, 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:	The Town Hall, Highway Garage, and Fire Department located in the Town do not have back up power, which could impact the continuity of operations at the facilities in the event of a utility or power failure. High winds associated with severe storms and severe winter storms are known to cause utility failures, which would impact the continuity of operations at both critical facilities. Rising water levels from floods could impact these facilities; back-up generators would permit any influx of water to be removed from the facilities via pumping systems.		
Description of the Solution:	The Town Engineer will conduct a study to determine the required generator capacity to support the critical facilities. 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-OleanT-05. Landslide Mitigation

Lead Agency:	Highway Department		
Supporting Agencies:	Engineering		
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. Landslide conditions exist along Stream Valley Road and Indiana Ave, near 1464 Indiana Ave. Landslides may be able to be mitigated by cutting banks to prevent erosion.		
Description of the Solution:	The Town Engineer will complete an assessment to identify an appropriate, cost-effective method to mitigation landslide risk along Stream Valley Road and Indiana Ave, near 1464 Indiana Ave. Possible mitigation measures include: <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 Stream Valley Road and Indiana Ave. 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	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No Action	Current problem exists	
	Reconstruct roadway outside of hazard area	Not feasible	
	Close road and reroute traffic around hazard area	Not feasible, would cause confusion amongst travelers	



Action 2025-OleanT-06. Floodplain Management Training

Lead Agency:	Code Enforcement	
Supporting Agencies:	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 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-OleanT-07. Flood Damage Prevention Ordinance Update

Lead Agency:	Code Enforcement		
Supporting Agencies:	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 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-OleanT-08. Comprehensive Outreach Program

Lead Agency:	Town Board		
Supporting Agencies:	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-OleanT-09. Flood Impacted and Repetitive Loss Properties

Lead Agency:	Code Enforcement		
Supporting Agencies:	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 type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Utility Failure <input type="checkbox"/> Wildfire	
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties. 40 properties along East and West River Roads are exposed to flooding and the Town has three repetitive loss properties, but other properties may be impacted by flooding as well.		
Description of the Solution:	The Town will conduct outreach to the flood prone properties located along East and West River Roads and will provide information on mitigation alternatives. After preferred mitigation measures are identified, the Town will collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating of the affected properties that experience frequent flooding. The parameters for this initiative would be funding, benefits versus cost, and willing participation of property owners.		
Estimated Cost:	Medium		
Potential Funding Sources:	FEMA FMA, FMA SWIFT, Town Budget, County Budget, Property Owners		
Implementation Timeline:	3 years		
Goals Met:	1		
Benefits:	This action would foster comprehensive floodplain management by removing at risk properties from the flood hazard area or elevating properties to reduce the flood risk.		
Impact on Socially Vulnerable Populations:	Collecting data regarding homeowners that reside within flood prone areas provides an opportunity to introduce location-specific opportunities for assistance. Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.		
Impact on Future Development:	Increased outreach to homeowners within a flood prone area will limit construction in areas that are prone to hazard events. Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.		
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact on Capabilities:	Outreach which promotes the removal of risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed. This action will enhance the Town's current NFIP capabilities.		
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of severe rainfall, flash flooding, riverine flooding, and coastal flooding from sea level rise and storm surge events. Removing structures from the floodplain will reduce the response and recovery costs as a result of these events and decrease the loss of human life as a result of these events. Elevating structures will reduce the recovery costs.		
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
	Levee around floodplain		Costly, not enough room.
	Deployable flood barriers		Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2025-OleanT-10. Develop a Comprehensive Emergency Management Plan

Lead Agency:	Town Board	
Supporting Agencies:	Cattaraugus Office of Emergency Services	
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 does not have a Comprehensive Emergency Management Plan (CEMP). Hazard mitigation principles need to be integrated into the CEMP. A CEMP establishes the overall authority, roles, and functions performed during incidents. Incorporating hazard mitigation principles into a CEMP ensures hazard risk is identified.	
Description of the Solution:	The Town Board will lead the development of the Comprehensive Emergency Management Plan (CEMP), with support from the Cattaraugus Office of Emergency Services. The CEMP will integrate hazard mitigation principles into its contents, including addresses capabilities related to reduce the risk to the identified hazards of concern identified with this Hazard Mitigation Plan. The Town will send the CEMP to the County for review, followed by a State review.	
Estimated Cost:	Low	
Potential Funding Sources:	Town Budget, EMPG	
Implementation Timeline:	3 years	
Goals Met:	1, 2, 4, 5	
Benefits:	The CEMP details what the Town will do during a disaster (incident command implementation, command center location and activities, specific plans by department, etc.). The creation of a CEMP will permit the Town to integrate new plans, policies, capabilities, and hazard assessments.	
Impact on Socially Vulnerable Populations:	The section overview portion of the CEMP covers a discussion of a variety of topics, including population distribution and locations, including any concentrated populations of individuals with disabilities, others with access and functional needs, or individuals with limited English proficiency.	
Impact on Future Development:	Future development will be protected by the actions which the Town performs following the CEMP.	
Impact on Critical Facilities/Lifelines:	The section overview portion of the CEMP covers a discussion of a variety of topics, including vulnerable critical facilities (e.g. nursing homes, schools, hospitals, infrastructure).	
Impact on Capabilities:	This action will create a new planning and response capability for the Town.	
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. As impacts from climate change are increasingly felt, the contents in an CEMP, including in the basic plan and any annexes, may need to be updated.	
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:	Action	
	No Action	
	Integrate hazard mitigation principles in only hazard appendices	
	Ask County to integrate hazard mitigation into the County CEMP	
Evaluation		
Current problem exists		
The plan will miss integration opportunities in the basic plan and annexes		
Town CEMP will remain undeveloped		



Action 2025-OleanT-11. Road Erosion Mitigation

Lead Agency:	Highway Department		
Supporting Agencies:	Engineering		
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>Roads in the Town have been eroded due to floodwaters stemming from severe storms and melted snow from 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 including:</p> <ul style="list-style-type: none"> • Godfrey Hollow Road • McCann Hollow Road • Steam Valley Road • Oregon Road • Indiana Avenue • Mueller Road 		
Description of the Solution:	<p>The Town will develop specific mitigation solutions for flood-prone road systems after conducting a flood study. Possible solutions may include:</p> <ul style="list-style-type: none"> • Elevation of roadways • Installation or improvement of drainage systems • Regrading of roadway and soils • Resurfacing or reshaping roadways 		
Estimated Cost:	TBD after 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 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 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 eroded road system		Not feasible
	Raise all eroded roads		Cost prohibitive



Action 2025-OleanT-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"> • Olean 12 • Olean 20 		
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-OleanT-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 <input type="checkbox"/> Low
Alternatives:	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