32. CITY OF OLEAN

This jurisdictional annex to the Cattaraugus County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the City 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.

32.1 HAZARD MITIGATION PLANNING TEAM

The City of Olean identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many City departments. The Director of Public Works represented the community on the Cattaraugus County HMP Planning Partnership 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 32-1 summarizes City officials who participated in the development of the annex and in what capacity. Additional documentation of the City's planning activities through Planning Partnership meetings is included in Volume I.

Table 32-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: James Sprague, Director of Public Works Address: Municipal Building, Olean, NY 14760 Phone Number: (716) 376-5650 Email: bring@cityoforelan.org	Name/Title: Eric Maurouard, Fire Chief Address: 101 East State Street, Olean, NY 14760 Phone Number: (716) 376-5687 Email: emaurouard@cityofolean.org
National Flood Insurance Program Floodplain Administrator	
Name/Title: Eric Maurouard, Fire Chief Address: 101 East State Street, Olean, NY 14760 Phone Number: (716) 376-5687 Email: emaurouard@cityofolean.org	
Additional Contributors	
Name/Title: Eric Maurouard, Fire Chief Method of Participation: Provided key input in the planning process and completed worksheets	
Name/Title: Bob Ring, Former Director of Public Works Method of Participation: Provided key input in the planning process and completed worksheets	
Name/Title: Dave Bauer, Code Enforcement Supervisor Method of Participation: Provided key input in the planning process and completed worksheets	
Name/Title: Brad Camp, Water and Wastewater Superintendent Method of Participation: Provided key input in the planning process and completed worksheets	

32.2 COMMUNITY PROFILE

The City of Olean is located within the Town of Olean and is located in the southeastern part of Cattaraugus County in western New York State. The City of Olean is the largest city in the county and serves as its financial business, transportation, and entertainment hub. The City of Olean has a total area of 6.17 square miles. The city is located where Olean Creek flows into the Allegheny River.

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 6.1 percent of the population is 5 years of age or younger, 17.7 percent is 65 years of age or older, 0.4 percent is non-English speaking, 23.4 percent is below the poverty threshold, and 18.2 percent is considered disabled.

32.3 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 City procedures.

32.3.1 Planning and Regulatory Capability and Integration

Table 32-2 summarizes the planning and regulatory tools that are available to Olean.

Table 32-2. 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	Chapter 6: Buildings, Building Regulations, and Fire Prevention	State and Local	Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk? This article provides for the administration and enforcement of the New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code) in the City of Olean, New York. Except as otherwise provided in the Uniform Code, the Energy Code, other state law, or other section of this article, all buildings, structures, and premises, regardless of use or occupancy, are subject to the provisions of this article.				
Zoning/Land Use Code	Yes	Chapter 28: Zoning	Local	Code Enforcement
How has or will this be integrated with the HMP and how does this reduce risk? The zoning regulations and districts herein set forth and as identified upon the Zoning Map of the City of Olean are made for the purpose of promoting public health, safety, and general welfare and prescribing the most desirable use for which the land in each district may be adapted and those uses to be subjected to special regulations, while conserving the value of land throughout the city. The height, bulk and location of buildings and other structures, the area of yards, courts, setbacks and other open spaces, the density of population and intensity of use of buildings and land, the use, conservation and development of unique water front areas, and the use of structures and land for residential, industrial, commercial, institutional or other purposes, are hereby restricted and regulated as hereinafter provided. Such regulations have been designed to preserve open space; lessen congestion in the streets; secure safety from fire, flood, and other dangers; provide adequate light, air, and convenience of access; and facilitate the adequate provision of transportation, water, sewage, schools, parks and other public services. They have been made with reasonable regard, among other things, to the character of each district and its suitability for particular uses as well as the value of buildings, land, and uses to promote the most appropriate use of land throughout the city.				
Subdivision Code	Yes	Chapter 22: Subdivision Regulations	Local	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk? The subdivision of land shall conform with these regulations as well as with appropriate laws, rules and regulations established by all governing bodies having or claiming jurisdiction over various phases of the proposed development. It is declared to be the policy of the common council to consider land subdivision to be part of a process that provides for the orderly, efficient and economical development of the city in a manner that is reasonable and in the best interest of the community.				
Site Plan Code	Yes	Chapter 28: Zoning, Article 9 Section 9.1 Site Plan Review and Approval	Local and County	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk? The intent of site plan approval is to authorize the city's planning board to review and approve site plans for uses otherwise permitted by this law in order to determine full compliance with the intent of the standards of this law. The objective is to evaluate site plans in order to minimize conflicts between the site layout and design of proposed uses and existing uses and natural site conditions and thereby minimize any adverse effects affecting the health, safety, and overall welfare of the community.				
Stormwater Management Code	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
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
Real Estate Disclosure Requirements	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent
How has or will this be integrated with the HMP and how does this reduce risk? In addition to facing potential liability for failing to disclose under the exceptions to “caveat emptor,” a home seller must make certain disclosures under the law or pay a credit of $500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.				
Growth Management	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Environmental Protection Ordinance(s)	Yes	Chapter 28: Zoning, Article 10 Section 10.8; Chapter 8: Environmental Controls	Local	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk? Chapter 28: Zoning, Article 10 Section 10.8: The City of Olean includes areas of steep slopes which are herein defined as slopes equal to or greater than 10%. Development in areas of steep slopes shall conform to specifications developed by the director of public works of the city. The provisions and requirements of this law shall not be a substitute for the applicable provisions and requirements of the State Environmental Quality Review Act of New York State. Chapter 8: Pursuant to Environmental Conservation Law § 24-050, the city shall fully undertake and exercise its regulatory authority with regard to activities subject to regulation under the act in freshwater wetlands, as shown on the freshwater wetlands map, as such map may from time to time be amended, filed by the department of environmental conservation pursuant to the Freshwater Wetlands Act [Environmental Conservation Law § 24-0101 et seq.], and in all area adjacent to any such freshwater wetland up to 100 feet from the boundary of such wetland. Such regulatory authority shall be undertaken and exercised in accordance with all of the procedures, concepts, and definitions set forth in the Freshwater Wetlands Act and Environmental Conservation Law art. 71, tit. 23 [§ 71-2301 et seq.] relating to the enforcement of the Freshwater Wetlands Act, as such act may from time to time be amended.				
Flood Damage Prevention Ordinance	Yes	Chapter 9: Flood Damage Prevention	Federal, State, County and Local	Fire Chief
How has or will this be integrated with the HMP and how does this reduce risk? It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: (1) Regulate uses 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; (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters; (4) Control filling, grading, dredging, and other development which may increase erosion or flood damages; (5) Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and (6) Qualify and maintain for participation in the National Flood Insurance Program.				
Wellhead Protection	No	-	-	-
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
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	Yes	City of Olean Comprehensive Development Plan, 2025	Local	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk? This Plan identifies projects to improve quality of life for residents, value-of-location for businesses, and municipal efficiency for the City of Olean. The planning process was community-driven and focused on the New York State identified Smart Growth Principles which target a mix of land uses, a range of housing opportunities and choices, creating a strong sense of place, well planned public spaces, availability of public transit, and walkable neighborhoods, amongst others.				
Capital Improvement Plan	Yes	Capital Improvement Plan	Local	Finance
How has or will this be integrated with the HMP and how does this reduce risk? City entities will submit desired capital projects to City Finance with project titles, descriptions, and anticipated costs. The submitted projects may include those with relevance to hazard mitigation, including stormwater management or making facilities more sustainable.				
Disaster Debris Management Plan	Yes	Cattaraugus County CEMP, Appendix 5	County	Cattaraugus County
How has or will this be integrated with the HMP and how does this reduce risk? The Disaster Debris Management Plan establishes procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner.				
Floodplain Management or Watershed Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Stormwater Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Open Space Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Urban Water Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Habitat Conservation Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				

	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
Economic Development Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Wildfire Protection Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk? Although the City does not currently have a Community Wildfire Protection Plan, one is in development.				
Community Forest Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Transportation Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Agriculture Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Climate Action/ Resilience/Sustainability Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Tourism Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Business/ Downtown Development Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
RESPONSE/RECOVERY PLANNING				
Comprehensive Emergency Management Plan	Yes	Comprehensive Emergency Management Plan, 2025	Local	Fire Chief
How has or will this be integrated with the HMP and how does this reduce risk? The Comprehensive Emergency Management Plan defines the scope of preparedness and emergency management activities necessary. 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	Yes	Comprehensive Emergency Management Plan, 2025	Local	Fire Chief
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
The Continuity of Operations Plan (COOP) is a policy and guidance document that ensures that essential functions for an agency or organization are continued in the event of an emergency. The COOP addresses emergencies from an all-hazards approach, including natural, manmade, or technological disasters.				
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	Yes	Health Department Strategic Plan 2022–2025	County	Health Department
How has or will this be integrated with the HMP and how does this reduce risk? The Cattaraugus County Health Department's (CCHD) Strategic Planning Process began in April 2022 using the resources of the New York State Department of Health NYS Public Health Corp Fellows. As a part of this process, the fellows reviewed the 2018–2021 strategic plan for past successes and failures and discussed what was needed for future success. Both an external assessment, in which county demographic data, economic factors, health outcomes, and community health assessment findings that have the potential to affect the agency and strategies were examined, and an internal assessment of a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was completed.				
Other: Community Needs Assessment and Community Health Improvement Plan	Yes	Community Needs Assessment and Community Health Improvement Plan	County	Health Department
How has or will this be integrated with the HMP and how does this reduce risk? The 2022–2024 OGH/BRMC Community Service Plan (CSP) and the CCHD's Community Health Assessment and Community Health Improvement Plan (CHA-CHIP) were conducted to identify significant health needs as outlined by the New York State Department of Health's 2022–2024 Prevention Agenda, where applicable. It also provides critical information OGH/BRMC, the CCHD, and others in a position to make a positive impact on the health of the region's residents. The CSP/CHA-CHIP enables the health department, hospital, and other community partners to strategically establish priorities, develop interventions, and direct resources to improve the health of residents living in the service area. The CSP/CHA-CHIP includes a detailed examination of priority areas identified in the NYS Prevention Agenda: (1) prevent chronic diseases; (2) promote a healthy and safe environment; (3) promote healthy women, infants and children; (4) promote well-being and prevent mental health and substance use disorders; and (5) prevent communicable diseases. The Prevention Agenda is a six-year effort to make New York the healthiest state. Developed in collaboration with 140 organizations, the plan identifies New York's most urgent health concerns, and suggests ways local health departments, hospitals, and partners from health, business, education, and community organizations can work together to solve them.				

32.3.2 Development and Permitting Capability

Table 32-3 summarizes the capabilities of Olean to oversee and track development.

Table 32-3. Development and Permitting Capability

	Yes/No	Comment
Do you issue development permits? • 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	DPW and Code Enforcement
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? • If you have a buildable land inventory, please describe	Yes	Within the Comprehensive Development Plan
Describe the level of buildout in your jurisdiction.	N/A	According to the Comprehensive Development Plan, approximately 18 percent of the land in the City is categorized as vacant. This percentage of land may be available for future development.

32.3.3 Administrative and Technical Capability

Table 32-4 summarizes potential staff and personnel resources available to Olean and their current responsibilities that contribute to hazard mitigation.

Table 32-4. 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 City relating to any subject matter over which the Planning Board has jurisdiction; reviews and makes recommendations on any proposed City comprehensive plan or amendments; has the authority to make investigations, maps, reports and recommendations relating to the planning and development of the City; 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 City subdivision regulations; has the authority to review and make recommendations on any other matters referred to it by the City.
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, 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

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
		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	-
Economic Development Commission/Committee	No	-
Public Works/Public Works	Yes	The City of Olean Department of Public Works is the largest and most diverse branch of city government consisting of 10 divisions that provide a wide range of essential services to the residents and businesses. Some of its responsibilities include operation and maintenance of city airport, maintenance of city streets and parking lots, maintenance of water distribution lines, treatment and distribution of water, water and sewer billings, water meter readings, wastewater collection and treatment, maintenance of stormwater and wastewater lines, oversight of capital improvements, maintenance of City vehicles and equipment, maintenance of parks, fields, and playground equipment, tree maintenance, traffic signal maintenance, maintenance of city buildings and facilities.
Construction/Building/Code Enforcement Department	Yes	The City of Olean's Building/Code Enforcement Department became incorporated into the Fire Department on January 1, 1994, under the new Charter, and is now known as the Department of Fire, Buildings and Emergency Services. The Department of Buildings is responsible for the administration and enforcement of all local codes, state codes and zoning laws of the city. The division is under direct control of the Fire Chief and supervised by the Deputy Fire Chief of Fire Prevention.
Emergency Management/Public Safety Department	Yes	The purpose of the City of Olean Police Department is to uphold the law fairly and firmly; to prevent crime and reduce the fear of crime; to pursue and bring to justice those who break the law; to keep the peace in partnership with the community; to protect, help and reassure the people; and to be seen to do all this with integrity, common sense and sound judgment. The City of Olean Department of Fire, Building and Emergency Services is located in the Southeastern part of Cattaraugus County in Western New York. The City of Olean encompasses 6.2 square miles of urban/suburban area with industrial areas and a commercial center. The City of Olean has a nighttime population of approximately 14,000 which increases during the day due to commuters for work, retail, and recreation. The City of Olean Fire

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
		Department is an all career (paid) fire department that operates out of two fire stations.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	City of Olean Department of Public Works Streets, Parks, Trees, Water, and Wastewater divisions.
Mutual aid agreements	Yes	Police and Fire
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
TECHNICAL/STAFFING CAPABILITY		
Planners or engineers with knowledge of land development and land management practices	Yes	DPW and Community Development
Engineers or professionals trained in building or infrastructure construction practices	Yes	DPW
Planners or engineers with an understanding of natural hazards	Yes	DPW
Staff with expertise or training in benefit/cost analysis	Yes	DPW and Auditor
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	Yes	The Youth Bureau & Recreation Department will work cooperatively in the community to serve the citizens with quality programs and activities, promoting self-esteem, good sportsmanship and citizenship, physical well-being, and safety while complementing the family unit.
Environmental scientists familiar with natural hazards	Yes	Sewer and Water
Surveyors	No	-
Emergency manager	Yes	Responsibilities fall on Fire Chief
Grant writers	Yes	DPW and Community Development
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

32.3.4 Fiscal Capability

Table 32-5 summarizes financial resources available to Olean.

Table 32-5. Fiscal Capabilities

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

32.3.5 Education and Outreach Capability

Table 32-6 summarizes the education and outreach resources available to Olean.

Table 32-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	Yes	Fire Department
Personnel skilled or trained in website development	Yes	IT Department
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	X (Formerly Twitter) and Facebook
Citizen boards or commissions that address issues related to hazard mitigation	Yes	City of Olean Emergency Preparedness Response Team
Warning systems for hazard events	Yes	NY Alert
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	Yes	The Youth Bureau & Recreation Department will work cooperatively in the community to serve the citizens with quality programs and activities, promoting self-esteem, good sportsmanship and citizenship, physical well-being, and safety while complementing the family unit.
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	Yes	Press Releases

32.3.6 Community Classifications

Table 32-7 summarizes classifications for community programs available to Olean.

Table 32-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	2024
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

32.3.7 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 32-8 summarizes the adaptive capacity for each identified hazard of concern and the City’s capability to address related actions using the following classifications:

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

Table 32-8. Adaptive Capacity

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

32.4 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 32-1 is responsible for maintaining this information.

32.4.1 NFIP Statistics

Table 32-9 summarizes the NFIP policy and claim statistics for Olean.

Table 32-9. Olean NFIP Summary of Policy and Claim Statistics

# Policies	57
# Claims (Losses)	29
Total Loss Payments	$214,595.10
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

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

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

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

Source: FEMA 2024

32.4.2 Flood Vulnerability Summary

Table 32-10 provides a summary of the NFIP program in Olean.

Table 32-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Neighborhoods south of the Allegheny River, which are not protected by levees. West Olean near the Two-Mile Creek.
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

NFIP Topic	Comments
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Per 2020 existing building code
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	Will adequately address after FEMA approves an updated version
NFIP Compliance	
What local department is responsible for floodplain management?	Fire Chief / Code Enforcement Department
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?	More localized (or on site) training to Cattaraugus County so training is more feasible to do with limited staffing.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit Review
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Per 2020 existing building code
What are the barriers to running an effective NFIP program in the community, if any?	Funding, training and staffing
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	CAC: June 4, 2013 CAV: April 6, 2022
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 9: Flood Damage Prevention
What is the date that your flood damage prevention ordinance was last amended?	November 12, 1971
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	Meets minimum requirements
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes, SEQR, Site Plan Review and Engineering review

NFIP Topic	Comments
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

32.5 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 32-11 through Table 32-13.

Table 32-11. 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	0	0	0	0
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	1	1
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	1	1
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	4	4
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 32-12. 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
The City did not indicate any recent major development or infrastructure occurred between 2019 to present.					

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

Table 32-13. 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
The City did not indicate any known or anticipated major development or infrastructure in the next five years.					

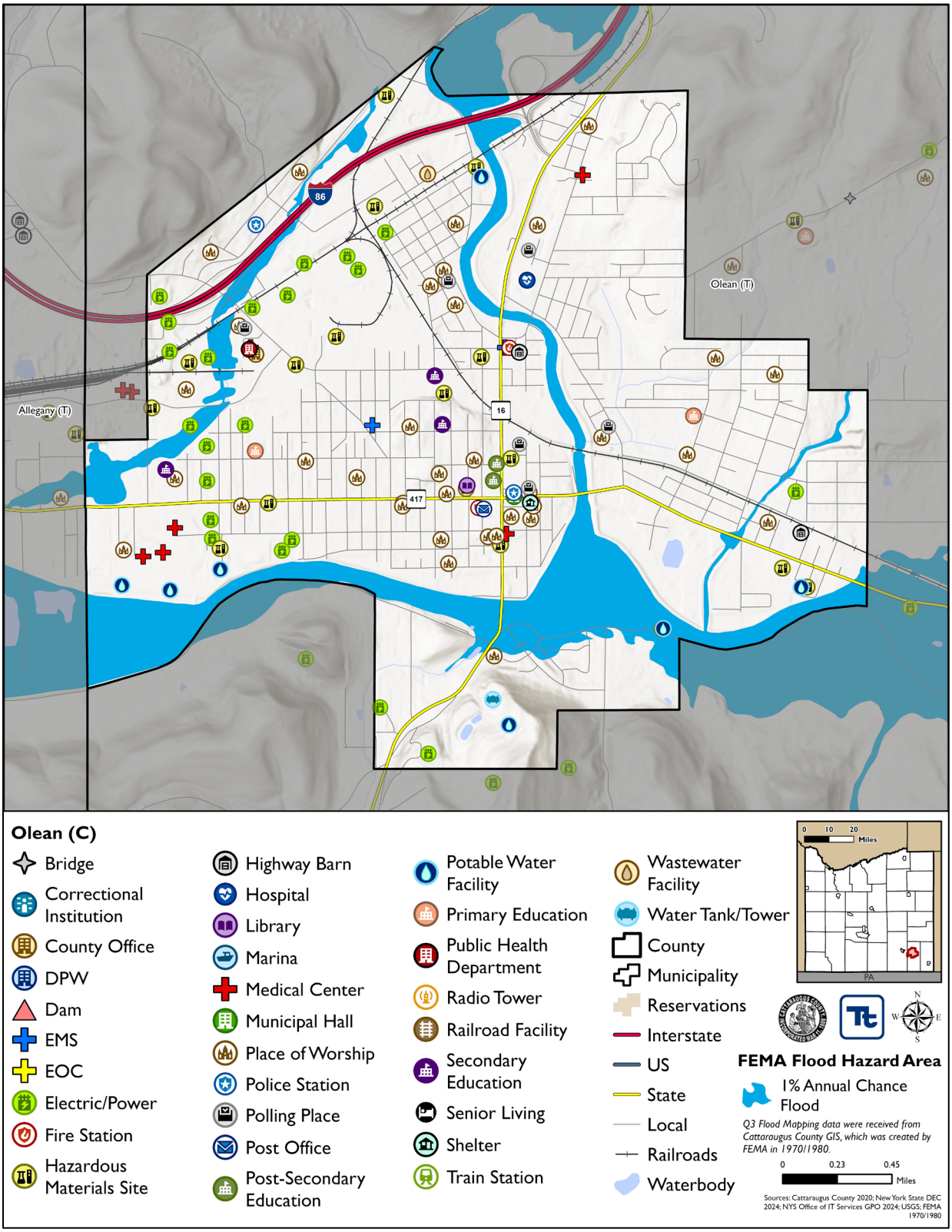
32.6 JURISDICTIONAL RISK ASSESSMENT

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.

32.6.1 Hazard Area

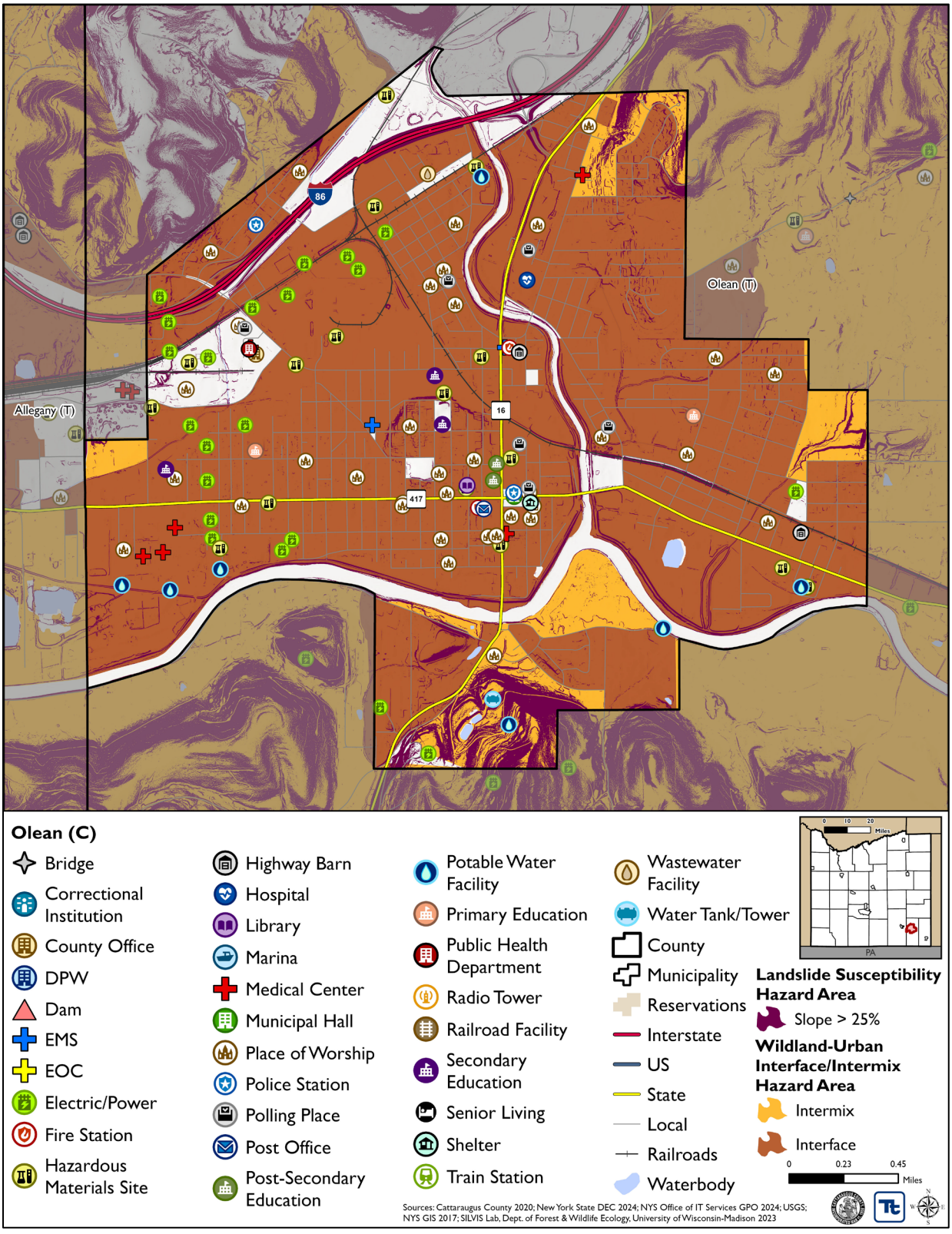
Hazard area maps provided below illustrate the probable hazard areas impacted within the City are shown in Figure 32-1 through Figure 32-2. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards 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 32-1. 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 32-2. Olean Landslide and Wildfire Hazard Area Extent and Location Map



32.6.2 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 32-14 provides details on loss and damage in Olean during hazard events since the last hazard mitigation plan update.

Table 32-14. 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 City did not experience any documented damages or losses.
March 13, 2020	EM-3434 DR-4480	Yes	COVID-19 Pandemic	The City adhered to the COVID-19 guidelines, with individuals working from home or practicing social distancing.
January 12, 2020	High Wind	N/A	High wind	The City did not experience any documented damages or losses.
July 16, 2020	Thunderstorm Wind	N/A	Trees and wires were reported down in Gowanda.	The City 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 City did not experience any documented damages or losses.
August 15, 2020	Flash Flood	N/A	Marble Road and Potter Road in Lime Lake were reported to be washed out by law enforcement.	The City did not experience any documented damages or losses.
September 7, 2020	Thunderstorm Wind	N/A	Property damage in Olean.	Damages to private property.
November 15, 2020	High Wind	N/A	Property damage throughout Cattaraugus County.	The City 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.	Several reports were received of trees down.
December 11, 2021	High Wind	N/A	Dozens of reports of trees and powerlines down were received.	The City 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
March 6, 2022	High Wind	N/A	High wind	The City 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 City did not experience any documented damages or losses.
November 20, 2022	EM-3589	Yes	Severe Winter Storm and Snowstorm	The City 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

32.6.3 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 City noted the following:

- The ranking for the Landslide hazard should be decreased from 'High' to 'Low' due to the limited structures at risk.

Table 32-15 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 32-15. Hazard Ranking

Hazard	Rank
Dam and Levee Failure	Medium
Flood	Medium
Landslide	Low
Pandemic	Medium
Severe Storm	High
Severe Winter Storm	High

Hazard	Rank
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 32-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 32-16. 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		
City Of Olean-Well Site	Potable Water Facility	X	-	2025-OleanC-01	-
City Olean - M13 Well House	Hazardous Materials Site	X	-	2025-OleanC-01	-
National Grid	Electric/Power	X	-	2025-OleanC-01	-

Source: Cattaraugus County 2024

32.6.4 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:

- The National Grid facility, M13 Well House, and City of Olean Well Site are located in the special flood hazard area and may be vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood level.
- The City does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The City is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.
- 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 roadways may be caused by debris in culverts from severe storms and severe winter storms. There are multiple roads in the City south of the Allegany River 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.
- Across the City, there are significant flooding and waterflow issues which impact the roadways and utilities, disrupting both traffic and utilities. The flooding occurs typically following heavy rain events associated with severe storms.
- Levees in the City are outdated, which increases the City's risk of levee failure. Significant rainfalls, temperature fluctuations, and flooding events may put stress on the integrity of the levees.

- South of the Allegany River in City limits is isolated from the rest of the community and not protected by levees. City water tanks are also across the river in south Olean. Levees would assist in the reduction of risk from the flood hazard by preventing waters from reaching the area.
- 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.
- Floodplain managers require training. Those responsible for floodplain management are lacking in their knowledge of required duties. Training is sorely needed for all municipal officials and for code enforcement officials in charge of municipalities.
- The City faces risk from wildfires but does not have a comprehensive education and outreach program to educate residents and businesses about hazard mitigation, preparation, response, and recovery utilizing a variety of outreach methods. The City does not currently have hazard mitigation information and outreach on the City website.
- The City faces risk from pandemic but does not have a comprehensive education and outreach program to educate residents and businesses about hazard mitigation, preparation, response, and recovery utilizing a variety of outreach methods. The City does not currently have hazard mitigation information and outreach on the City website.
- Critical facilities require backup power to ensure continuity of operations. The City Streets Garage (701 Barry Street), John Ash Community Center (112 N Barry Street), and Olean Recreation Center (551 E State Street) 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.
- 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. Culverts on Front Street at Johnson Brook are undersized or have been damaged from instances of flooding and the debris caused by severe storms and severe winter winters. The culvert is at risk of failing and at risk of overtopping in the event of flood waters. Front St is a busy street and one of the two routes from east Olean to West Olean. Front Street is likely to be an evacuation route if east Olean were to be evacuated due to flooding or another hazard.
- The area surrounding Two Mile Creek, from Edgewood Avenue to Homer Street, is prone to flooding, impacting nearby roads and properties. Two Mile Creek has bank erosion issues, threatening encroachment onto nearby roads. Banks become eroded due to heavy rains from severe storms, degradation from flood waters and compacted snow and ice from severe winter storms. Stabilization measures, such as including gabions, riprap, drainpipes and/or related improvements, should be considered to prevent flooding. Additional flood mitigation measures may also be considered.
- The area surrounding Kings Brook, from Brook Street to Seneca Avenue, is prone to flooding, impacting nearby roads and properties. Kings Brook has bank erosion issues, threatening encroachment onto nearby roads. Banks become eroded due to heavy rains from severe storms, degradation from flood waters and compacted snow and ice from severe winter storms. Stabilization measures, such as including gabions, riprap, drainpipes and/or related improvements, should be considered to prevent flooding. Additional flood mitigation measures may also be considered.
- Properties in the City have been subject to flooding impacts. On East Riverside Drive 10-20 properties have experienced damages during substantial periods of heavy rain, as well as 10-20 properties on the north

end of York Street and additional 10-20 properties have been impacted on West River Road; other properties may be impacted by flooding as well.

- Outdated building codes put new construction at risk during hazard events, as high winds can cause damage to structures, snow loads can impact roofs, and older construction materials may lead a structure to be more susceptible to landslide, severe storm, severe winter storm, and wildfire damages. Swift flowing waters from floods.
- South Olean water tanks, Stardust Water Tank, Sewage Treatment Plant, Pines and Eden Heights, as well as high dollar properties are potentially exposed to wildfires and landslides. Protecting these properties and infrastructure from wildfires and landslides is crucial to ensuring continuity of operations and services for their consumers. Exposure to these hazards can cause damage or destruction.
- The storage facility for road salt is located at the City Garage site where preparation for plowing and salting operations take place prior to and during severe winter storms. The salt barn structure was built in 1910 and the overall condition of the building is poor. The building is not repairable and should be replaced.
- The City's wireless Wide Area Network (WAN), which provides phone communication and internet connectivity to all City facilities, is housed on top of a private building and does not have backup power on site. Loss of power at the private building results in losses of phone and internet communication in City facilities. Critical facilities require backup power to ensure continuity of operations. 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.
- Heavy rains contributes to instances of flooding and flash flooding within the City, which can result in the entrapment of individuals in high or swift-moving floodwaters. The City of Olean Fire Department is underequipped to handle a medium-to-large-scale flooding incident with entrapment or people in the water.
- The waterline on Washington Street is outdated and undersized and needs to be replaced. Existing lines often break due to extreme cold events, resulting in constant leaks and the need to replace lines. The disruption of utility services puts strain on the water system and its users.
- The City has levees within its jurisdiction, and nearby dams which may impact the City. Despite not being high-hazard potential dams, these structures have the potential to impact the people, property, infrastructure, and environment nearby.
- Water and wastewater facilities in the City are vulnerable to the utility failure hazard, as the majority of the existing infrastructure have various single point of failure vulnerabilities, meaning that if a part of a system were to stop working, the entire system would fail.
- There is only one bridge existing in the City which provides access to the Southern portion of the City; this bridge is located on South Union Street. If an evacuation is required, this single route may be detrimental in the movement of persons and goods from the City.
- The City does not have a Community Wildfire Protection Plan. A Community Wildfire Protection Plan assists in addressing issues such as wildfire response, hazard mitigation, community preparedness, and structure protection.
- 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.

32.7 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.

32.7.1 Past Mitigation Action Status

Table 32-17 indicates progress on the City'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.

32.7.2 Additional Mitigation Efforts

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

Table 32-17. 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-City of Olean-001	Hydraulic study of under drains city-wide	Flood	City Board	Problem: There is flooding and waterflow issues within the city Solution: Encourage FEMA to conduct hydrologic and hydraulic analysis to study existing flooding and waterflow concerns in the city. Then the city will install appropriate drainage infrastructure	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-002	Work with National Grid Facility owner to protect the facility to the 0.2% annual chance flood event	Flood	FPA	Problem: The National Grid facility is in the special flood area and vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood level. Solution: The city will contact facility manager at National Grid to discuss options to protect the facility to the 0.2% annual chance flood event	1. No Progress 2. Other projects took precedent.	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-003	Protect City of Olean- M13 Well House to the 0.2% annual chance flood event	Flood	Engineer, Facility Manager	Problem: City of Olean- M13 Well House is in the special flood area and vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood level. Solution: The city will conduct a feasibility assessment to determine what additional floodproofing measures are needed at the M13 Well House to protect it to the 0.2% annual chance flood level. Options include: •Elevation of facility •Floodproofing of facility •Mobile flood barriers	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Once the most cost-effective option is identified, the city will carry out the option.		
2020-City of Olean-004	Protect City of Olean- Well Site to the 0.2% annual chance flood event	Flood	Engineer, Facility Manager	Problem: The City of Olean- Well Site is in the special flood area and vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood level. Solution: The city will conduct a feasibility assessment to determine what additional floodproofing measures are needed at the Well Site to protect it to the 0.2% annual chance flood level. Options include: •Elevation of facility •Floodproofing of facility •Mobile flood barriers Once the most cost-effective option is identified, the city will carry out the option.	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-005	Water distribution system improvements	Utility Failure	City of Olean	Problem: Waterline on Washington St is outdated and undersized and needs to be replaced. Existing lines often break due to extreme cold events, resulting in constant leaks and the need to replace lines. Solution: The city will work with the county to replace the waterline with a 4000’ waterline on Washington St.	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-006	Levees in the city need to be improved	Flood, Severe Storm	NYSDEC	Problem: Levees in the city are outdated. Solution: Conduct an engineering study to determine what needs updated and then the city will conduct the levee improvements.	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020-City of Olean-007	Conduct a feasibility study to identify best actions to prevent flooding south of Allegany River	Flood, Severe Storm	Engineer	Problem: South of Allegany River in city limits is isolated from the rest of the community and not protected by levees. City water tanks are also across the river in south Olean. Solution: Conduct a feasibility study south of Allegany River to see if levees would be beneficial.	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-008	Update Flood Damage Prevention Ordinance	Flood	City board	Problem: City of Olean lacks an updated flood damage prevention ordinance Solution: The city will update the flood damage prevention ordinance	1. No Progress 2. Other projects took precedent.	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-009	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 projects took precedent.	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-010	Provide information to residents, business owners, and organizations about what they can do to prevent their structures from wildfires.	Wildfires	City board	Problem: Additional public education on wildfire risk is needed Solution: the city 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 projects took precedent.	1. Include 2. Not applicable 3. Not applicable

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020-City of Olean-011	Generators for City Streets Garage, John Ash Community Center, and Olean Recreation Center	All Hazards	City, DPW	Problem: Lack of backup power for City Streets Garage on 701 Barry St, John Ash Community Center on 112 N Barry St, and Olean Recreation Center at 551 E State St. Solution: Purchase and install generators for City Streets Garage, John Ash Community Center, and Olean Recreation Center.	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-012	Culverts on Front St at Johnson Brook	Flood, Severe Storm	City, DPW	Problem: Built in the 1930's, this culvert is undermined, deteriorating, and undersized. The culvert is at risk of failing and at risk of overtopping in the event of flood waters. Front St is a busy street and one of the two routes from east Olean to West Olean. Front Street is likely to be an evacuation route if east Olean were to be evacuated due to flooding or another hazard. Solution: Remove existing culvert and replace with a new culvert roughly 1.5 times the culvert opening size. The new culvert would be a box culvert and while the new culvert is installed, Johnson Brook would undergo erosion control along the banks immediately adjacent to the culvert opening.	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-013	Identify projects to prevent further erosion occurring at Two Mile Creek-Edgewood Ave to Homer Street and	Flood, Severe Storm	Public Works, City	Problem: Erosion occurring at Two Mile Creek-Edgewood Ave to Homer Street (property damage) and erosion occurring at Kings Brook-Brook St to Seneca Ave threatening properties Solution: Conduct feasibility study to determine best action to prevent further erosion at Two Mile	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Kings Brook- Brook St to Seneca Ave			Creek and Kings Brook and implement identified actions.		
2020-City of Olean-014	Potential acquisition/elevation projects for E Riverside Dr, York Street, and W River Rd	Flood, Severe Storm	City of Olean	Problem: E Riverside Dr 10-20 homes, York Street, north end 10-20 residential, W River Rd, north of street 10-20 homes prone to flooding Solution: Conduct an engineering study to determine best action (elevation, buyout) to protect homes from flooding. Then the city will implement best action	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-015	Update the Emergency Operations Plan.	All Hazards	County, city	Problem: The city has an outdated Emergency Operations Plan Solution: The city will update the city's Emergency Operation Plan to include current hazards identified in the Hazard Mitigation Plan.	1. Completed 2. Plan was updated in 2025	1. Discontinue 2. Not applicable 3. Plan was updated in 2025
2020-City of Olean-016	Update Building Code	All Hazards	County, city	Problem: Building codes in the city are outdated Solution: The city will update building codes so buildings are built to withstand hazards they face.	1. No Progress 2. Other projects took precedent.	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-017	Assess the site-specific vegetation conditions and determine necessary mitigation measures to protect critical facilities from wildfire	Wildfire	City, Fire Dept, Facility owners	Problem: South Olean water tanks, Stardust Water Tank, Sewage Treatment Plant, Pines and Eden Heights, as well as high dollar properties are potentially exposed to wildfires Solution: Assess the site-specific vegetation conditions and determine necessary mitigation measures to protect South Olean water tanks, Stardust Water Tank, Sewage Treatment Plant,	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Pines and Eden Heights, as well as high dollar properties from wildfires.		
2020-City of Olean-018	Assess the site-specific slope conditions and determine necessary mitigation measures to protect the facilities from landslide	Landslide	City, facility owners	Problem: South Olean water tanks, Stardust Water Tank, Sewage Treatment Plant, Pines and Eden Heights, as well as high dollar properties are potentially exposed to landslides Solution: Assess the site-specific slope conditions and determine necessary mitigation measures to protect South Olean water tanks, Stardust Water Tank, Sewage Treatment Plant, Pines and Eden Heights, as well as high dollar properties from landslides	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-019	Purchase a Wildfire and Flood Rescue Pickup Truck	Wildfire, Flood	Fire Department	Problem: No heavy-duty pickup truck with Wildfire Capability during that season while being utilized as a Support vehicle the rest of the year. The city has a vehicle that is at the end of its service life and is essential to these types of operations. Solution: Purchase a ¾ or 1-ton crew cab pickup truck. The truck will have a skid unit that will be installed during wildfire season and rescue cap with rollout ray rescue operations the rest of the season. The vehicle would respond to incidents and also have towing capability to deliver trailers, boats ,and personnel to the scene of an incident	1. Completed 2. Vehicle was purchased.	1. Discontinue 2. Not applicable 3. Vehicle was purchased
2020-City of Olean-020	City Garage Salt Barn	Severe storm, Severe winter storm	City DPW	Problem: The storage facility for road salt is located at the City Garage site where preparation for plowing and salting operations take place. The salt barn structure was built in 1910 and the	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				overall condition of the building is poor. The building is not repairable and should be replaced. Solution: Conduct an engineering study to design a new and efficient salt barn. The city will then demolish existing salt barn and replace with hybrid-canvas salt storage building on same site.		
2020-City of Olean-021	Wireless WAN Tower	Severe winter storm, Severe storm, Utility failure	City DPW	Problem: the city's wireless wide area network which provides phone communication and internet connectivity to all our facilities expect the Olean Municipal building is housed on top of a private building and does not have backup power on site. Loss of power of the private building results in losses of phone and internet communication in the buildings and requires 24-hour staffing of water and wastewater departments when communications go down. Solution: Decommission existing wireless communication equipment, relocate to city property at the water reservoir site in South Olean with new communication equipment and backup power either through generator or solar backup.	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable
2020-City of Olean-022	City of Olean Fire Department Flood Preparedness	Flood, Severe storm	Fire Department	Problem: The City of Olean Fire Department is underequipped to handle medium to large scale flooding incident with entrapment or people in the water. Costs with training, equipment, and maintaining technical skills is an issue. Solution: Increase members trained and equipped to mitigate and respond to this issue by having a	1. No Progress 2. Financial constraints	1. Include 2. Not applicable 3. Not applicable

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				third to half of all members trained at the Swiftwater/Flood Rescue Technician level as well as equipping them with the appropriate level of PPE.		

32.7.3 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 City priorities.

Table 32-18 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 32-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 32-18. 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					
Flood	X	X	X	X	X	X	X	X	X	X
Landslide	X				X					
Pandemic				X			X			
Severe Storm	X	X	X		X			X	X	X
Severe Winter Storm	X	X	X		X			X	X	X
Utility Failure	X	X			X				X	X
Wildfire	X			X	X		X			X

Local Plans and Regulations (LPR)—These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.

Structure and Infrastructure Project (SIP)—These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct structures to reduce the impact of hazards.

Natural Systems Protection (NSP)—These are actions that minimize damage and losses and preserve or restore the functions of natural systems.

Education and Awareness Programs (EAP)—These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

Preventative Measures (PR)—Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.

Property Protection (PP)—These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.

Public Information (PI)—Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.

Natural Resource Protection (NR)—Actions that minimize hazard loss and preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

Structural Flood Control Projects (SP)—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.

Emergency Services (ES)—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities

Table 32-19. 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-OleanC-01	Critical Facility Protection	1	1	1	1	1	1	0	1	1	1	0	1	1	0	11	High
2025-OleanC-02	Substantial Damage Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
2025-OleanC-03	Floodprone Roads	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-OleanC-04	City-Wide Hydraulic Drainage Study	1	1	1	1	1	0	1	1	1	1	1	1	0	0	11	High
2025-OleanC-05	Levee Improvements	1	1	1	1	0	0	1	1	1	1	1	1	1	0	11	High
2025-OleanC-06	Levee Feasibility Study	1	1	1	1	1	0	1	1	1	0	1	1	0	0	**10**	Medium
2025-OleanC-07	Flood Damage Prevention Ordinance Update	1	1	1	1	1	1	1	1	1	1	1	1	0	0	12	High
2025-OleanC-08	Floodplain Management Training	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2025-OleanC-09	Wildfire Education and Outreach	1	1	1	1	1	1	0	1	1	0	1	1	0	1	11	High
2025-OleanC-10	Pandemic Education and Outreach	1	1	1	1	1	1	0	1	1	0	1	1	0	1	11	High
2025-OleanC-11	Generators at Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2025-OleanC-12	Undersized Culverts	1	1	1	1	1	0	1	0	1	1	1	1	1	0	11	High
2025-OleanC-13	Two Mile Creek Erosion	1	1	1	1	0	0	1	1	1	1	1	1	0	1	11	High
2025-OleanC-14	Kings Brook Erosion	1	1	1	1	0	0	1	1	1	1	1	1	0	1	11	High
2025-OleanC-15	Property Flood Mitigation	1	1	1	1	1	0	1	1	1	0	1	1	0	1	11	High
2025-OleanC-16	Review and Revise Building Codes	1	1	1	1	1	1	0	0	1	1	1	1	0	0	10	Medium

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-OleanC-17	Critical Facility Wildfire and Landslide Mitigation Measures	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-OleanC-18	City Garage Salt Barn	0	1	1	1	1	0	1	1	1	1	1	1	1	0	11	High
2025-OleanC-19	Wireless WAN Tower	1	1	1	1	1	1	0	1	1	1	1	1	1	0	12	High
2025-OleanC-20	City of Olean Fire Department Flood Preparedness	1	0	1	1	1	0	0	1	1	1	1	1	1	0	10	Medium
2025-OleanC-21	Water Distribution System Improvements	0	1	1	1	1	0	1	1	1	0	1	1	1	0	10	Medium
2025-OleanC-22	Dam and Levee Owner Partnership	1	1	1	1	1	1	0	1	1	0	1	1	1	0	11	High
2025-OleanC-23	Water and Wastewater Infrastructure Redundancies	1	1	1	1	1	0	0	1	1	0	1	1	1	1	11	High
2025-OleanC-24	Bridge Construction Feasibility	1	0	1	1	0	0	1	1	1	0	1	0	1	1	9	Medium
2025-OleanC-25	Community Wildfire Protection Plan Development	1	1	1	1	1	1	1	1	1	0	1	1	1	0	12	High
2025-OleanC-26	Federal Accreditation Standards	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High

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

Action 2025-OleanC-01. Critical Facility Protection

Lead Agency:	Critical Facility Owners and Managers	
Supporting Agencies:	Common Council	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	The National Grid facility, M13 Well House, and City of Olean Well Site are located in the special flood hazard area and may be vulnerable to flooding. Critical facilities must be protected to the 0.2% annual chance flood level.	
Description of the Solution:	The City 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. The city will contact the facility manager at National Grid to make them aware of possible floodproofing measures. Options include: • Elevation of facility • Floodproofing of facility • Mobile flood barriers Once the most cost-effective option is identified, the City and/or facility manager will carry out the option.	
Estimated Cost:	Medium	
Potential Funding Sources:	FEMA HMA, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, City Budget	
Implementation Timeline:	Within 5 Years	
Goals Met:	1, 3, 5	
Benefits:	Ensures continuity of operations of several critical facilities in the City.	
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	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☒Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐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-OleanC-02. Substantial Damage Management Plan

Lead Agency:	Public Works	
Supporting Agencies:	Code Enforcement, Common Council	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must: • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for "market value" and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure's pre-damage value. • Require permits for floodplain development. The City does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The City is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.	
Description of the Solution:	The City will develop a Substantial Damage Management Plan, following the six-step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.	
Estimated Cost:	Low	
Potential Funding Sources:	City Budget	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 4	
Benefits:	This action will provide a guidance document to determine substantial damage in the City.	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may disproportionately be impacted by substantial damages.	
Impact on Future Development:	Not applicable	
Impact on Critical Facilities/Lifelines:	Not applicable	
Impact on Capabilities:	This action will produce substantial damage guidance for City officials to use.	
Climate Change Considerations:	Climate change is leading to an increase in frequency and intensity of precipitation events, which also increases flooding and may lead to a main failure.	
Mitigation Category	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☒Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Rely on state or federal resources following disaster events	Resources may not be available during major widespread events
Establish MOUs with outside agencies to conduct Substantial Damage Determinations	A plan outlining responsibility is still necessary to prevent missing important requirements

Action 2025-OleanC-03. Floodprone Roads

Lead Agency:	Public Works	
Supporting Agencies:	Code Enforcement, Engineering, NYS DOT	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☒Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	Flood prone roads not only interrupt the movement of persons and goods but can lead to isolation issues where first responders are unable to reach their destination and cause evacuation routes to be inaccessible. Flooded roadways may be caused by debris in culverts from severe storms and severe winter storms. There are multiple roads in City south of the Allegany River which may benefit from flood mitigation strategies, such as the elevation of the roadways or the hardening of the infrastructure surrounding them to reduce likelihood of flooding.	
Description of the Solution:	The City will develop specific mitigation solutions for flood-prone road systems after conducting a flood study. Possible solutions may include: • 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, City 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 City'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	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☒Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐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-OleanC-04. City-Wide Hydraulic Drainage Study

Lead Agency:	Common Council	
Supporting Agencies:	Engineering, FEMA, Public Works, County Public Works	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	Across the City, there are significant flooding and waterflow issues which impact the roadways and utilities, disrupting both traffic and utilities. The flooding occurs typically following heavy rain events associated with severe storms.	
Description of the Solution:	Encourage FEMA to conduct hydrologic and hydraulic analysis to study existing flooding and waterflow concerns in the City. The City Public Works will then install appropriate drainage infrastructure on its roads and will work with County Public Works to ensure drainage infrastructure is installed on roads under their jurisdiction.	
Estimated Cost:	TBD on identified solutions from study	
Potential Funding Sources:	FEMA HMA, City Budget, County Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 4	
Benefits:	This action will identify measures to protect infrastructure in the water systems lifeline and reduce the risk of flooding within the City. Furthermore, the transportation lifeline will be supported as appropriate drainage can reduce the risk to flood road ways and keep roads clear for evacuations, regular travel, and emergency responses.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties may be impacted by flooding associated with undersized drainage systems.	
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 water systems lifeline and reduce the risk of flooding within the City. Furthermore, the transportation lifeline will be supported as appropriate drainage can reduce the risk to flood road ways and keep roads clear for evacuations, regular travel, and emergency responses.	
Impact on Capabilities:	This action improves the City's reliability in terms of water drainage and 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. Ensuring that floodwaters are efficiently and effectively removed from areas in the City reduces the risk of flooding.	
Mitigation Category	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☒Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐Low

Alternatives:	Action	Evaluation
	No Action	Current problem exists
	Raise all flood prone roads	Cost prohibitive
	Replace the entire drainage system	Cost prohibitive

Action 2025-OleanC-05. Levee Improvements

Lead Agency:	Engineering	
Supporting Agencies:	NYS DEC	
Hazard(s) of Concern:	☒Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	Levees in the City are outdated, which increases the City's risk of levee failure. Significant rainfalls, temperature fluctuations, and flooding events may put stress on the integrity of the levees.	
Description of the Solution:	Work with NYS DEC to conduct an engineering study to determine weaknesses in the levees. The City will continue to work with NYS DEC to complete the identified necessary levee improvements.	
Estimated Cost:	TBD by engineering study	
Potential Funding Sources:	FEMA HMA, City Budget, NYS DEC	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 3, 4	
Benefits:	This action will result in the identification of a flood mitigation measure to reduce the flood risk to the structures near the City's levee systems.	
Impact on Socially Vulnerable Populations:	This action will protect the vulnerable populations residing downstream from the City's levee systems by identifying and implementing the identified flood mitigation measure(s).	
Impact on Future Development:	This action will provide protection from the flood hazard to future development located downstream from the City's levee systems.	
Impact on Critical Facilities/Lifelines:	This action will strengthen the integrity of the City's levee systems.	
Impact on Capabilities:	Not applicable	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. These changes are likely to increase flood risks. This action seeks to reduce the risk of flood.	
Mitigation Category	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☒Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Remove levee system	Populations become unprotected from the flood hazard
Tear down the levee system and build a new one	Cost prohibitive

Action 2025-OleanC-06. Levee Feasibility Study

Lead Agency:	Engineering		
Supporting Agencies:	NYS DEC		
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire	
Description of the Problem:	South of the Allegany River in City limits is isolated from the rest of the community and not protected by levees. City water tanks are also across the river in south Olean. Levees would assist in the reduction of risk from the flood hazard by preventing waters from reaching the area.		
Description of the Solution:	Conduct a feasibility study with NYS DEC of the areas South of the Allegany River to see if levees would be effective in reducing the area's flood risk.		
Estimated Cost:	Medium		
Potential Funding Sources:	FEMA HMA, City Budget, NYS DEC		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 3, 4		
Benefits:	This action will result in the identification of whether a new levee system is required to reduce the flood risk to the structures and residents residing south of the Allegany River.		
Impact on Socially Vulnerable Populations:	This action will protect the vulnerable populations residing south of the Allegany River by identifying whether a new levee system should be constructed.		
Impact on Future Development:	This action will provide protection from the flood hazard to future development located downstream from the levee system, should it be constructed.		
Impact on Critical Facilities/Lifelines:	This action will identify whether the City will expand its levee systems.		
Impact on Capabilities:	This action may expand the City's flood risk reduction capabilities.		
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. These changes are likely to increase flood risks. This action seeks to reduce the risk of flood.		
Mitigation Category	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)	
CRS Category	☒Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)	
Priority	☐High	☒Medium	☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Conduct study but do not implement findings	Would not reduce flood risk
Conduct feasibility study without NYS DEC input	Study may be inconclusive due to lack of data

Action 2025-OleanC-07. Flood Damage Prevention Ordinance Update

Lead Agency:	Code Enforcement	
Supporting Agencies:	Common Council	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐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 City 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 City will update and adopt the Flood Damage Prevention Ordinance.	
Estimated Cost:	Low	
Potential Funding Sources:	City 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	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☒Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐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-OleanC-08. Floodplain Management Training

Lead Agency:	Code Enforcement	
Supporting Agencies:	Common Council	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐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 City 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:	City 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	☐Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☒Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☒Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐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-OleanC-09. Wildfire Education and Outreach

Lead Agency:	Common Council		
Supporting Agencies:	Cattaraugus County		
Hazard(s) of Concern:	☐Dam and Levee Failure ☐Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☒Wildfire	
Description of the Problem:	The City faces risk from wildfires but does not have a comprehensive education and outreach program to educate residents and businesses about hazard mitigation, preparation, response, and recovery utilizing a variety of outreach methods. The City does not currently have hazard mitigation information and outreach on the City website.		
Description of the Solution:	Create outreach materials, or utilize those from Cattaraugus County, on wildfire risks and methods of mitigation measures. Methods of distribution may include City events, the City newsletters, social media, the City website, and having the materials on display for the public at City libraries and offices. Outreach materials will be specified with education and information for the wildfire hazard.		
Estimated Cost:	Low		
Potential Funding Sources:	City Budget		
Implementation Timeline:	1 year		
Goals Met:	1, 2, 3, 4		
Benefits:	This action will improve the public education and outreach capabilities in the City by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the City.		
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the wildfire hazard which may impact them in the City.		
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 the wildfire hazard. 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 public education and outreach capabilities and adapt it to the City'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 the wildfire hazard and how climate change may exacerbate those risks.		
Mitigation Category	☐Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☒Education and Awareness Programs (EAP)	
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☒Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)	
Priority	☒High	☐Medium	☐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 City
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-OleanC-10. Pandemic Education and Outreach

Lead Agency:	Common Council		
Supporting Agencies:	Cattaraugus County		
Hazard(s) of Concern:	☐Dam and Levee Failure ☐Flood ☐Landslide ☒Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire	
Description of the Problem:	The City faces risk from pandemic but does not have a comprehensive education and outreach program to educate residents and businesses about hazard mitigation, preparation, response, and recovery utilizing a variety of outreach methods. The City does not currently have hazard mitigation information and outreach on the City website.		
Description of the Solution:	Create outreach materials, or utilize those from Cattaraugus County, on pandemic risks and methods of mitigation measures. Methods of distribution may include City events, the City newsletters, social media, the City website, and having the materials on display for the public at City libraries and offices. Outreach materials will be specified with education and information for the pandemic hazard.		
Estimated Cost:	Low		
Potential Funding Sources:	City Budget		
Implementation Timeline:	1 year		
Goals Met:	1, 2, 3, 4		
Benefits:	This action will improve the public education and outreach capabilities in the City by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the City.		
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the pandemic hazard which may impact them in the City.		
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 the pandemic hazard. 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 public education and outreach capabilities and adapt it to the City'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 the pandemic hazard and how climate change may exacerbate those risks.		
Mitigation Category	☐Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☒Education and Awareness Programs (EAP)	
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☒Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)	
Priority	☒High	☐Medium	☐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 City
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-OleanC-11. Generators at Critical Facilities

Lead Agency:	Engineering	
Supporting Agencies:	Common Council	
Hazards of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☒Severe Winter Storm ☒Utility Failure ☐Wildfire
Description of the Problem:	Critical facilities require backup power to ensure continuity of operations. The City Streets Garage (701 Barry Street), John Ash Community Center (112 N Barry Street), and Olean Recreation Center (551 E State Street) 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 City Engineer will conduct a study to determine the required generator capacity to support the critical facility. The City 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 the critical facilities and their 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, City Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 4, 5	
Benefits:	This action protects public health and safety and ensures continued operation of critical facilities and their 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 critical facilities that could support future development.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures continued operation of critical facilities and their 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	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☒High	☐Medium ☐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-OleanC-12. Undersized Culverts

Lead Agency:	Public Works		
Supporting Agencies:	Code Enforcement, Engineer		
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☒Severe Winter Storm ☒Utility Failure ☐Wildfire	
Description of the Problem:	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. Culverts on Front Street at Johnson Brook are undersized or have been damaged from instances of flooding and the debris caused by severe storms and severe winter winters. The culvert is at risk of failing and at risk of overtopping in the event of flood waters. Front St is a busy street and one of the two routes from east Olean to West Olean. Front Street is likely to be an evacuation route if east Olean were to be evacuated due to flooding or another hazard.		
Description of the Solution:	The City Engineer will complete an engineering survey of the culverts in City that are undersized and contribute to flooding to determine the proper size necessary to provide stormwater capacity. The City Public Works will complete the necessary upsizing for the culverts.		
Estimated Cost:	TBD after study is complete		
Potential Funding Sources:	FEMA HMA, CHIPS, City 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	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)	
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☒Structural Flood Control Projects (SP) ☐Emergency Services (ES)	
Priority	☒High	☐Medium	☐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.

Action 2025-OleanC-13. Two Mile Creek Erosion

Lead Agency:	Engineering	
Supporting Agencies:	Code Enforcement	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☒Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	The area surrounding Two Mile Creek, from Edgewood Avenue to Homer Street, is prone to flooding, impacting nearby roads and properties. Two Mile Creek has bank erosion issues, threatening encroachment onto nearby roads. Banks become eroded due to heavy rains from severe storms, degradation from flood waters and compacted snow and ice from severe winter storms. Stabilization measures, such as including gabions, riprap, drainpipes and/or related improvements, should be considered to prevent flooding. Additional flood mitigation measures may also be considered.	
Description of the Solution:	The City Engineer will assess the feasibility and cost-effectiveness of various stabilization measures, such as including gabions, riprap, drainpipes and/or related improvements to prevent future flooding surrounding Two Mile Creek.	
Estimated Cost:	High	
Potential Funding Sources:	FEMA HMA, City Budget, NYS DEC	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 2	
Benefits:	Overall flooding will be reduced, which will result in less frequency of road closures and reduced damage to properties.	
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 surrounding Two Mile Creek will have its risk of flood impacts reduced.	
Impact on Critical Facilities/Lifelines:	Critical facilities and community lifelines near Two Mile Creek would have a reduced risk to the flood hazard.	
Impact on Capabilities:	Not applicable	
Climate Change Considerations:	Climate change is likely to result in more frequent and severe rainfall events. These events can lead to an influx of water, resulting in flooding conditions.	
Mitigation Category	☐Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☒Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☒Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☐High	☐Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Elevate nearby roads	Cost prohibitive
Acquire all properties which flood	Cost prohibitive

Action 2025-OleanC-14. Kings Brook Erosion

Lead Agency:	Engineering	
Supporting Agencies:	Code Enforcement	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☒Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	The area surrounding Kings Brook, from Brook Street to Seneca Avenue, is prone to flooding, impacting nearby roads and properties. Kings Brook has bank erosion issues, threatening encroachment onto nearby roads. Banks become eroded due to heavy rains from severe storms, degradation from flood waters and compacted snow and ice from severe winter storms. Stabilization measures, such as including gabions, riprap, drainpipes and/or related improvements, should be considered to prevent flooding. Additional flood mitigation measures may also be considered.	
Description of the Solution:	The City Engineer will assess the feasibility and cost-effectiveness of various stabilization measures, such as including gabions, riprap, drainpipes and/or related improvements to prevent future flooding surrounding Kings Brook.	
Estimated Cost:	High	
Potential Funding Sources:	FEMA HMA, City Budget, NYS DEC	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 2	
Benefits:	Overall flooding will be reduced, which will result in less frequency of road closures and reduced damage to properties.	
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 surrounding Kings Brook will have its risk of flood impacts reduced.	
Impact on Critical Facilities/Lifelines:	Critical facilities and community lifelines near Kings Brook would have a reduced risk to the flood hazard.	
Impact on Capabilities:	Not applicable	
Climate Change Considerations:	Climate change is likely to result in more frequent and severe rainfall events. These events can lead to an influx of water, resulting in flooding conditions.	
Mitigation Category	☐Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☒Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☒Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☐High	☐Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Elevate nearby roads	Cost prohibitive
Acquire all properties which flood	Cost prohibitive

Action 2025-OleanC-15. Property Flood Mitigation

Lead Agency:	Code Enforcement	
Supporting Agencies:	Common Council	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	Properties in the City have been subject to flooding impacts. On East Riverside Drive 10-20 properties have experienced damages during substantial periods of heavy rain, as well as 10-20 properties on the north end of York Street and additional 10-20 properties have been impacted on West River Road; other properties may be impacted by flooding as well.	
Description of the Solution:	The City will conduct outreach to the impacted properties and will provide information on mitigation alternatives. After preferred mitigation measures are identified, the City 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, City 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 City'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	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☒Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐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-OleanC-16. Review and Revise Building Codes

Lead Agency:	Code Enforcement	
Supporting Agencies:	Common Council	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☒Landslide ☐Pandemic	☒Severe Storm ☒Severe Winter Storm ☐Utility Failure ☒Wildfire
Description of the Problem:	Outdated building codes put new construction at risk during hazard events, as high winds can cause damage to structures, snow loads can impact roofs, and older construction materials may lead a structure to be more susceptible to landslide, severe storm, severe winter storm, and wildfire damages. Swift flowing waters from floods or dam and levee failures can cause structures to buckle or come off its foundation due to the immense pressure.	
Description of the Solution:	The City will review and revise building codes to integrate hazard mitigation principles to create a more resilient community. The City will also use available tools and resources from FEMA and other sources to integrate climate adaptation planning such as FEMA's "Climate Adaptation Planning: Guidance for Emergency Managers" document. Updated building codes will meet the minimum requirements set by the State.	
Estimated Cost:	Low	
Potential Funding Sources:	City Budget	
Implementation Timeline:	4 years	
Goals Met:	1, 4	
Benefits:	Mitigation considerations being taken when developing or updating building and zoning codes can lessen the risk of damage from a hazard event and increase overall community resiliency.	
Impact on Socially Vulnerable Populations:	Communities that collaborate and coordinate their regulatory efforts are more likely to have identified ways to best work with vulnerable populations to increase their level of preparedness.	
Impact on Future Development:	Updated building and zoning codes ensure that any new development that does take place is built to the safest standards based upon the best available data.	
Impact on Critical Facilities/Lifelines:	Integrating mitigation into building and zoning protects existing infrastructure and guides the safe development of new construction.	
Impact on Capabilities:	A consolidated review process brings together the capabilities of agencies and departments and better identifies what resources are available at any given point in time and where they are needed most.	
Climate Change Considerations:	As the climate changes, regulatory processes will require a more intense focus on maintenance and gathering of the best data to remain current and accurate over time. The City the adaptation planning such as FEMA's "Climate Adaptation Planning: Guidance for Emergency Managers" document.	
Mitigation Category	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☒Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☐High	☒Medium ☐Low

Alternatives:	Action	Evaluation
	No Action	Current problem exists
	Do not reach minimum State standards	Will be below standards
	Adopt building code without integrating hazard mitigation principles	Will not increase City's resiliency

Action 2025-OleanC-17. Critical Facility Wildfire and Landslide Mitigation Measures

Lead Agency:	Facility Owners	
Supporting Agencies:	Fire Department, Engineering	
Hazard(s) of Concern:	☐Dam and Levee Failure ☐Flood ☒Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☒Utility Failure ☒Wildfire
Description of the Problem:	South Olean water tanks, Stardust Water Tank, Sewage Treatment Plant, Pines and Eden Heights, as well as high dollar properties are potentially exposed to wildfires and landslides. Protecting these properties and infrastructure from wildfires and landslides is crucial to ensuring continuity of operations and services for their consumers. Exposure to these hazards can cause damage or destruction.	
Description of the Solution:	Assess the site-specific vegetation and slope conditions and determine necessary mitigation measures to protect South Olean water tanks, Stardust Water Tank, Sewage Treatment Plant, Pines and Eden Heights, as well as high dollar properties from wildfires and landslides.	
Estimated Cost:	TBD depending on identified mitigation measures	
Potential Funding Sources:	FEMA HMA, City Budget, Facility Budgets	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 5	
Benefits:	This action will reduce the risk of the wildfire and landslide hazards to critical facilities, ensuring continuity of operations. The continued operation of these facilities is crucial to the facilities' service area.	
Impact on Socially Vulnerable Populations:	Populations living near and working at or near the critical facilities would have enhanced protections from the wildfire and landslide hazards. Services from these critical facilities would remain intact to consumers.	
Impact on Future Development:	Future development near the existing critical facilities would have enhanced protections from the wildfire and landslide hazards.	
Impact on Critical Facilities/Lifelines:	The identified critical facilities, as well as other facilities nearby, would have enhanced protections from the wildfire and landslide hazards. This action will assist in ensuring continuity of operations.	
Impact on Capabilities:	Not applicable	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. Wildfires may be exacerbated by increased extreme heat and drought occurrences; landslide risk may be heightened due to the anticipated increase in frequency of heavy rainfall events which may cause slope instability.	
Mitigation Category	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☒Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Relocate facilities	Cost prohibitive, not feasible
Bring all property locations to 0-percent grade	Cost prohibitive, not feasible

Action 2025-OleanC-18. City Garage Salt Barn

Lead Agency:	Public Works	
Supporting Agencies:	Engineering	
Hazard(s) of Concern:	☐Dam and Levee Failure ☐Flood ☐Landslide ☐Pandemic	☐Severe Storm ☒Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	The storage facility for road salt is located at the City Garage site where preparation for plowing and salting operations take place prior to and during severe winter storms. The salt barn structure was built in 1910 and the overall condition of the building is poor. The building is not repairable and should be replaced.	
Description of the Solution:	The City will demolish existing salt barn. The City Engineer will work with Public Works to scope and replace the salt barn with a structurally sound and weather-proof structure to protect the City salt supply for winter storm response on same site.	
Estimated Cost:	Medium	
Potential Funding Sources:	FEMA HMA, USDA Community Facilities Grant Program, City Budget	
Implementation Timeline:	Within 2-3 years	
Goals Met:	1, 4, 5	
Benefits:	This action will support the continuity of operations for the critical services within the City, including the Public Works Department and first responders. The Public Works Department will maintain its capability to provide road treatments in time of need, ensuring roads are accessible for first responders and regular travelers.	
Impact on Socially Vulnerable Populations:	Vulnerable populations will have access to maintained roads, ensuring safe travel,	
Impact on Future Development:	Individuals living within future development in the City will have access to safe, treated roadways.	
Impact on Critical Facilities/Lifelines:	The construction of this structure will enhance the transportation lifeline by ensuring roads are safe to traverse during severe winter storms. Furthermore, it will create an additional critical facility.	
Impact on Capabilities:	This action will ensure the Public Works Department is able to maintain its capabilities.	
Climate Change Considerations:	Climate change is likely to result in more frequent and severe rainfall events. These events would further expose materials stored outside to the elements, degrading not just the materials, but pushing them into the environment, potentially disrupting the ecosystem.	
Mitigation Category	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☒High	☐Medium ☐Low

Alternatives:	Action	Evaluation
	No Action	Current problem exists
	Build salt barn in a new location	No problem with current location
	Make improvements not demolish	Building is beyond repair

Action 2025-OleanC-19. Wireless WAN Tower

Lead Agency:	Engineering	
Supporting Agencies:	Common Council	
Hazards of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☒Severe Winter Storm ☒Utility Failure ☐Wildfire
Description of the Problem:	The City's wireless Wide Area Network (WAN), which provides phone communication and internet connectivity to all City facilities, is housed on top of a private building and does not have backup power on site. Loss of power at the private building results in losses of phone and internet communication in City facilities. Critical facilities require backup power to ensure continuity of operations. 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 City will decommission the existing wireless communication equipment and relocate to a City property at the Water Reservoir Site in South Olean. New communication equipment will be installed at this site. The City Engineer will conduct a study to determine the required generator capacity to support the property at the Water Reservoir Site. The City 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 the critical facilities and their 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, City Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 4, 5	
Benefits:	This action protects public health and safety and ensures continued operation of critical facilities and their 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 critical facilities that could support future development.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures continued operation of critical facilities and their 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	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☒High	☐Medium ☐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-OleanC-20. City of Olean Fire Department Flood Preparedness

Lead Agency:	Fire Department	
Supporting Agencies:	Common Council	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	Heavy rains contributes to instances of flooding and flash flooding within the City, which can result in the entrapment of individuals in high or swift-moving floodwaters. The City of Olean Fire Department is underequipped to handle a medium-to-large-scale flooding incident with entrapment or people in the water.	
Description of the Solution:	Increase the number of fire department members which are trained and equipped to mitigate and respond to flooding events by offering the Swiftwater/Flood Rescue Technician course. Purchase the appropriate PPE to respond to flood and flash flooding events.	
Estimated Cost:	Medium	
Potential Funding Sources:	City Budget, Fire Department Budget, Assistance to Firefighter's Grant, HSGP	
Implementation Timeline:	Within 4 years	
Goals Met:	1	
Benefits:	This action will support the safety of the City by providing new training and equipment for the City's Fire Department to effectively respond to flooding incidents and remove individuals from harm's way.	
Impact on Socially Vulnerable Populations:	The City population will be supported by the new capability of the Fire Department as a result of this action. Individuals who may find themselves in comprising locations during flooding and flash flooding events will have increased likelihood to be safely removed from the predicament.	
Impact on Future Development:	Persons in future development will be supported by the new capability from this action.	
Impact on Critical Facilities/Lifelines:	This action will strengthen the City's safety and security lifeline by increasing the Fire Department's capabilities.	
Impact on Capabilities:	This action will create a new capability for the City by ensuring the City's emergency response personnel have the necessary training and equipment to conduct Swiftwater rescue operations.	
Climate Change Considerations:	Climate change is likely to result in more frequent and severe rainfall events. This action will ensure the City's emergency response personnel have the necessary training and equipment to conduct Swiftwater rescue operations.	
Mitigation Category	☐Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☒Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☐High	☒Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Train staff but do not purchase necessary equipment and/or PPE	Response capability would be halfway fulfilled
Purchase necessary equipment and/or PPE but do not train staff	Response capability would be halfway fulfilled

Action 2025-OleanC-21. Water Distribution System Improvements

Lead Agency:	Public Works	
Supporting Agencies:	Cattaraugus County Public Works	
Hazard(s) of Concern:	☐Dam and Levee Failure ☐Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☒Utility Failure ☐Wildfire
Description of the Problem:	The water line on Washington Street is outdated and undersized and needs to be replaced. Existing lines often break due to extreme cold events, resulting in constant leaks and the need to replace lines. The disruption of utility services puts strain on the water system and its users.	
Description of the Solution:	The City will work with the County to replace the waterline with a 4000' water line on Washington Street.	
Estimated Cost:	Medium	
Potential Funding Sources:	City Budget, County Budget, FEMA HMA	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 4	
Benefits:	This action will ensure the continued, uninterrupted services provided to City residents and businesses.	
Impact on Socially Vulnerable Populations:	Populations which are serviced by this water line will have continued utility services.	
Impact on Future Development:	Future development in the vicinity of Washington Street will be supported by the infrastructure.	
Impact on Critical Facilities/Lifelines:	This action will support the continuity of operations for the water systems lifeline.	
Impact on Capabilities:	This action will ensure utilities in the City are adequate to support the community.	
Climate Change Considerations:	Climate change is likely to result in fluctuating temperatures. Shifts from warmer to colder temperatures can shock infrastructure and cause pipes to expand and contract rapidly, causing deterioration to occur quicker than anticipated.	
Mitigation Category	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☐High	☒Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Current problem exists
Replace the water line with same size piping	May still result in disruption to service
Do not add insulation to installed pipes	Continued deterioration may occur after pipe insulation due to cold temperature exposure

Action 2025-OleanC-22. Dam and Levee Owner Partnership

Lead Agency:	Common Council	
Supporting Agencies:	NYS DEC, Dam Owners, Levee Owners	
Hazard(s) of Concern:	☒Dam and Levee Failure ☐Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	The City has levees within its jurisdiction, and nearby dams which may impact the City. Despite not being high-hazard potential dams, these structures have the potential to impact the people, property, infrastructure, and environment nearby.	
Description of the Solution:	The City will work with the owners of the dams and levees to ensure inspections and safety procedures are up to date. If cost-effective mitigation measures or retrofit options are identified that can increase the level of safety and length of useful life, the Dam and/or Levee Owner will pursue funding support, permit approval from NYS DEC, and implement the cost-effective measures.	
Estimated Cost:	Low	
Potential Funding Sources:	City Budget	
Implementation Timeline:	Within 5 years	
Goals Met:	1, 2, 3	
Benefits:	This action will improve the safety and security of those who live near the dams and/or levees and increase the resilience of responding agencies.	
Impact on Socially Vulnerable Populations:	The action will result in better preparedness for those living near areas where the dams and/or levees are located.	
Impact on Future Development:	Future development near the dams and/or levees will be more secure as safety procedures and inspections are regularly performed on the dams.	
Impact on Critical Facilities/Lifelines:	Dams and levees are considered a critical facility. This action will create an understanding of the safety procedures in place for each identified dam and strengthen the structural integrity of dams and/or levees, as needed.	
Impact on Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.	
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events, which may contribute to the likelihood of a dam and/or levee failure event. This action will increase the capabilities to respond to these events.	
Mitigation Category	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☒Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☐Emergency Services (ES)
Priority	☒High	☐Medium ☐Low

Alternatives:

Action	Evaluation
No Action	City will be unaware of any safety concerns for the dam and/or levee or its condition
Utilize information from NYS DEC	Owners may not be required to submit a safety plan to the State
Utilize information from National Inventories	Not all dams and levees are listed on the inventory

Action 2025-OleanC-23. Water and Wastewater Infrastructure Redundancies

Lead Agency:	Facility Managers		
Supporting Agencies:	Engineering		
Hazard(s) of Concern:	☐Dam and Levee Failure ☐Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☒Utility Failure ☐Wildfire	
Description of the Problem:	Water and wastewater facilities in the City are vulnerable to the utility failure hazard, as the majority of the existing infrastructure have various single point of failure vulnerabilities, meaning that if a part of a system were to stop working, the entire system would fail.		
Description of the Solution:	The City Engineer will work with facility managers at each identified water and wastewater facility to identify their facility's single point(s) of failure. Once identified, the facility managers will consult with the City engineer, or a contracted engineer, to implement a back-up or redundancy option which would allow the facility to continue operations should the single point fail.		
Estimated Cost:	TBD depending on identified measures		
Potential Funding Sources:	FEMA HMA, City Budget, Facility Budgets		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 5		
Benefits:	This action will assist in ensuring continuity of operations at critical water and wastewater infrastructure across the City.		
Impact on Socially Vulnerable Populations:	Populations which rely on the services from the critical facilities would have enhanced protections from losing those services.		
Impact on Future Development:	Future development which receive services from the critical facilities will have enhanced protections from losing those services.		
Impact on Critical Facilities/Lifelines:	The identified critical facilities, as well as other facilities nearby, would have enhanced protections from the utility failure hazard. This action will assist in ensuring continuity of operations.		
Impact on Capabilities:	Redundancies at critical facilities can ensure power is not lost and the services provided to the community are continuous.		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. Several hazards of concern, including severe storm, severe winter storm, wildfire, landslide, flood, and dam and levee failure can contribute to utility failures.		
Mitigation Category	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)	
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)	
Priority	☒High	☐Medium	☐Low

Alternatives:	Action	Evaluation
	No Action	Problem persists
	Construct new facilities	Cost prohibitive, not necessary
	Identify back-up facilities to provide services if operations go down	Providers may not be able to extend services or have bandwidth for additional consumers

Action 2025-OleanC-24. Bridge Construction Feasibility

Lead Agency:	Engineering	
Supporting Agencies:	Public Works, NYS DOT, NYS DEC	
Hazard(s) of Concern:	☐Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☒Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐Wildfire
Description of the Problem:	There is only one bridge existing in the City which provides access to the Southern portion of the City; this bridge is located on South Union Street. If an evacuation is required, or if the bridge becomes damaged from flooding conditions or from impacts as a result of severe storms, this single route may be unable to assist in the movement of persons and goods from or into the City.	
Description of the Solution:	The City Engineer, in partnership with NYS DOT, NYS DEC, and Cattaraugus County Public Works, will evaluate the need and feasibility of constructing a secondary bridge over the Allegany River.	
Estimated Cost:	High	
Potential Funding Sources:	NYS DOT, City Budget	
Implementation Timeline:	5+ years	
Goals Met:	1	
Benefits:	This action will create a secondary transportation route to the southern portion of the City, ensuring accessibility to traditional vehicle operators and emergency services.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations reach necessary services provided by the City.	
Impact on Future Development:	Future development in the impacted area will be able to access critical facilities and community lifelines.	
Impact on Critical Facilities/Lifelines:	Ensures transportation routes remain open and accessible to the public for daily use and evacuation needs. Provides an additional point of access for first responders into communities that may have faced damage from a hazard event on either side of the bridge.	
Impact on Capabilities:	Increases community resiliency to flooding events in vulnerable areas that would normally be vulnerable to prolonged isolation after high-water events.	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. The South Union Street Bridge may become eroded due to flood waters from the Allegany River; a secondary bridge would ensure a route is maintained out of the City to the South.	
Mitigation Category	☐Local Plans and Regulations (LPR) ☒Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☐High	☒Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Problem persists
Bridge construction outside of jurisdiction	Problem may still persist
Build pedestrian bridge	Evacuation or movement of goods via foot not feasible

Action 2025-OleanC-25. Community Wildfire Protection Plan Development

Lead Agency:	City Fire Department	
Supporting Agencies:	City Administration	
Hazard(s) of Concern:	☐Dam and Levee Failure ☐Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☒Wildfire
Description of the Problem:	The City does not have a Community Wildfire Protection Plan. A Community Wildfire Protection Plan assists in addressing issues such as wildfire response, hazard mitigation, community preparedness, and structure protection.	
Description of the Solution:	The City will update the Community Wildfire Protection Plan collaboratively with government representatives, in consultation with federal agencies and other interested parties.	
Estimated Cost:	Low	
Potential Funding Sources:	City Budget	
Implementation Timeline:	Within 3 years	
Goals Met:	1, 2, 4, 6	
Benefits:	This action will create a capability to address issues such as wildfire response, hazard mitigation, community preparedness, and structure protection.	
Impact on Socially Vulnerable Populations:	This action will provide socially vulnerable populations an opportunity to be involved in the planning process, as a key element in community fire planning should be the meaningful discussion it promotes among community members regarding their priorities for local fire protection and forest management.	
Impact on Future Development:	This action may identify areas in which future development should be restricted due to vulnerability to the wildfire hazard.	
Impact on Critical Facilities/Lifelines:	This action will identify critical facilities and community lifelines located within the wildland–urban interface and are vulnerable to the wildfire hazard.	
Impact on Capabilities:	This action will create a new planning capability.	
Climate Change Considerations:	Higher temperatures are expected to increase the amount of moisture that evaporates from land and water. These changes have the potential to lead to more frequent and severe droughts, which, in turn, increases the likelihood of wildfires.	
Mitigation Category	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☒High	☐Medium ☐Low

Alternatives:

Action	Evaluation
No Action	Problem persists
Create without collaborative input	Plan will not meet minimum HFRA requirements
Abandon Community Wildfire Protection Plan	Reduction in wildfire capabilities

Action 2025-OleanC-26. Federal Accreditation Standards

Lead Agency:	Municipal Engineer	
Supporting Agencies:	Cattaraugus County Public Works, FEMA, USACE, Dam Owners, Levee Owners	
Hazard(s) of Concern:	☒Dam and Levee Failure ☒Flood ☐Landslide ☐Pandemic	☐Severe Storm ☐Severe Winter Storm ☐Utility Failure ☐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 City 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	☒Local Plans and Regulations (LPR) ☐Structure and Infrastructure Project (SIP)	☐Natural Systems Protection (NSP) ☐Education and Awareness Programs (EAP)
CRS Category	☐Preventative Measures (PR) ☐Property Protection (PP) ☐Public Information (PI)	☐Natural Resource Protection (NR) ☐Structural Flood Control Projects (SP) ☒Emergency Services (ES)
Priority	☒High	☐Medium ☐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