# Jurisdictional Annexes

## Village of Carthage

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

## Hazard Mitigation Planning Team

The Village of Carthage identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Village departments.

Table A summarizes local officials who participated in the development of the annex. Additional documentation of the Village’s planning activities through Planning Partnership meetings is included in Volume I.

Table A. Hazard Mitigation Planning Team

|  |  |
| --- | --- |
| Primary Point of Contact | Alternate Point of Contact |
| Name/Title: Michael Astafan, Mayor  Address:120 South Mechanic Street, Carthage, New York 13619  Phone Number:(315) 493-1060  Email: president@villageofcarthageny.gov | Name/Title: Rachael Vary, Village Clerk  Address:120 South Mechanic Street, Carthage, New York 13619  Phone Number:(315) 493-1060  Email: ct@villageofcarthageny.gov |
| ***National Flood Insurance Program Floodplain Administrator*** | |
| Name/Title: John Poggi, Zoning Enforcement  Address: 120 South Mechanic Street, Carthage, New York 13619  Phone Number: (315) 493-1060  Email: ct@villageofcarthageny.gov | |

## Community Profile

### Community Classifications

Table B summarizes classifications for community programs available to Carthage.

Table B. Community Classifications

| **Program** | **Participating? (Yes/No)** | **Classification** | **Date Classified** |
| --- | --- | --- | --- |
| Building Code Effectiveness Grading Schedule (BCEGS) | Yes | 3 | 6/27/22 |
| Community Rating System (CRS) | No | - | - |
| Firewise Communities classification | No | - | - |
| National Weather Service StormReady Certification | No | - | - |
| Public Protection (ISO Fire Protection Classes 1 to 10) | Yes | 4 | Unknown |
| NYSDEC Climate Smart Community | Yes |  |  |
| Other: Organizations with mitigation focus (advocacy group, non-government) | No | - | - |

*N/A = Not applicable*

### Community Profile

The Village of Carthage has an area of three-square miles and is located in the eastern part of the County. The Village of Carthage is located completely within the Town of Wilna which is bordered by Lewis County to the east, the Town of Antwerp and Town of Philadelphia to the north, the Town of LeRay to the west, and the Town of Champion to the south. Numerous state highways run directly through the Village of Carthage.

According to the U.S. Census, the 2020 population for the Village of Carthage was 3,236 which makes up 2.8 percent of the county population. Data from the 2022 American Community Survey indicates that 9.7 percent of the population is 5 years of age or younger, 15.9 percent is 65 years of age or older, zero percent is non-English speaking, 19 percent is below the poverty threshold, and 18.2 percent is considered disabled.

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

Each jurisdiction has unique assets, vulnerabilities and overall risk. A multi-jurisdictional plan needs to identify every hazard (from the whole planning area). In hazard mitigation planning, risk is the potential for damage or loss when natural hazards interact with people or assets. These assets may be buildings, infrastructure or natural and cultural resources. A risk assessment is a robust, data-driven analysis. It explains what might happen. It also finds where the local jurisdiction is vulnerable to hazards.

Each community must describe how the selected hazards affect its jurisdiction. Some hazards will have similar effects across the area: extreme temperatures, windstorms, winter weather, drought, heavy rain, etc. Some have a smaller location and will vary based on geography. Multi-jurisdictional plans must explain these differences.

A diagram of a risk

Description automatically generated

Risk is the relationship, or overlap, between hazards and community assets. The smaller the overlap, the lower the risk.

### Hazard Area

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

Figure 1. Carthage Flood and Coastal Erosion Hazard Area Extent and Location Map

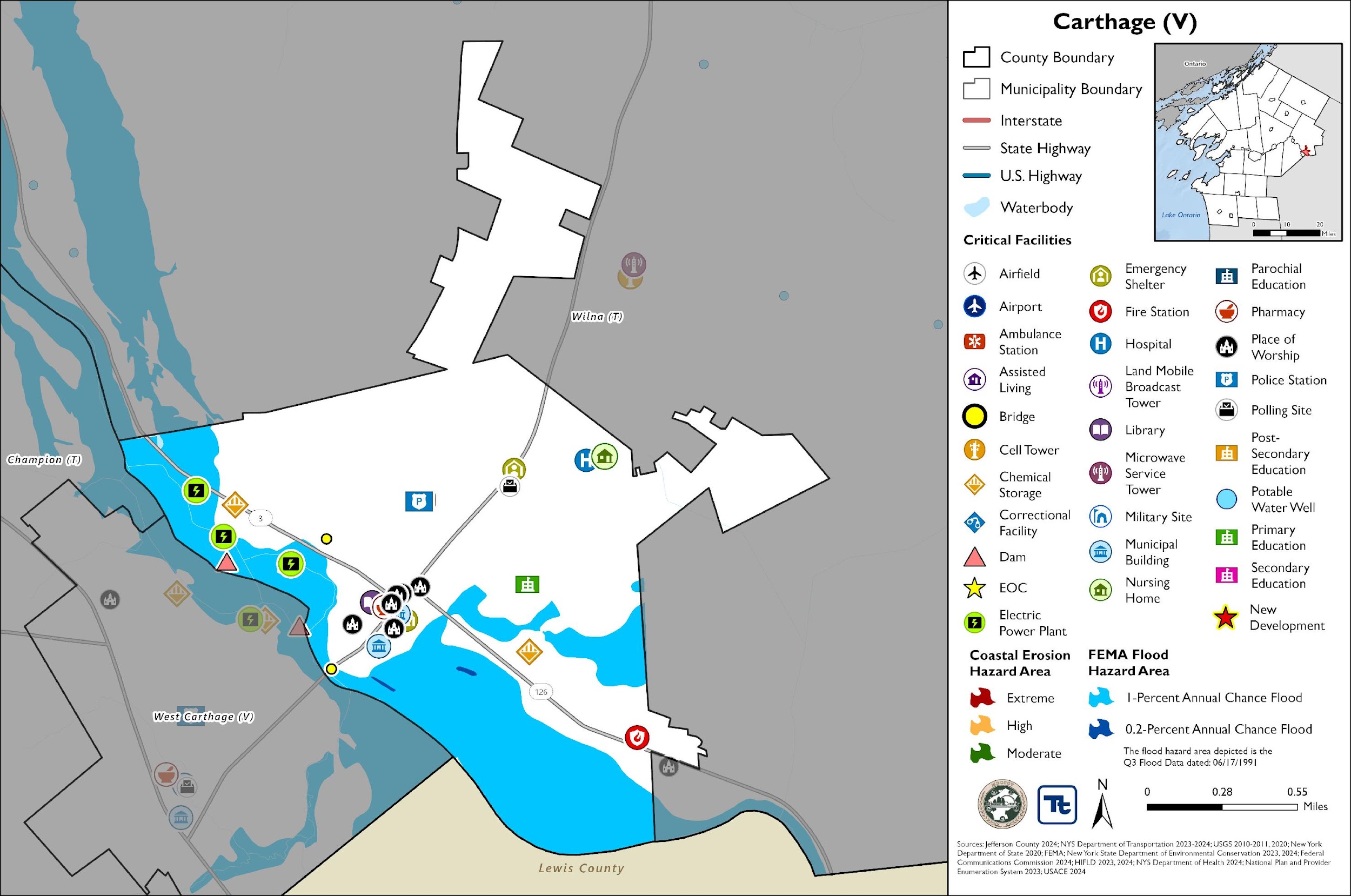


Figure 2. Carthage Landslide and WUI Hazard Area Extent and Location Map

A map of a city

Description automatically generated

### Previous Event History

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

Table C. Presidential Disaster Declaration History in Carthage

| Dates of Event | Event Type (Disaster Declaration) | Summary of Event | Summary of Damage and Losses in Carthage |
| --- | --- | --- | --- |
| November 18-22, 2022 | Severe Winter Storm (EM-3589) | A winter storm caused more than six feet of snow to accumulate in Jefferson County. This intense snowfall has created extremely dangerous travel conditions, and as a result, numerous road closures and travel bans. | The Village experienced an overwhelming rate of snowfall which caused municipal and emergency vehicles to leave the highway and/or get stuck in the snow. Municipal vehicles sustained damage and tow trucks were necessary to move them. Round the clock snow removal and police calls hindered personnel budgets |
| October 31 – November 1, 2019 | Severe Storm, Flood (DR-4472) | A storm system brought record breaking rains, damaging wind gusts (45 to 50 mph), a small Lake Ontario seiche, and river flooding to the region. Thousands of power outages occurred across the area, and wind-related damage closed hundreds of roads and did countless tree damage. High winds and lakeshore flooding continued into November 1. | The Village experienced power outages and downed trees and wires. |
| May 2 – August 6, 2017 | Flood (DR-4348) | Six months of wet weather led to an over-accumulation of waters in Lake Ontario. Flooding from the lake began impacting areas in May and continued until early autumn. Waves destroyed public and private break walls all along the lake shore. Thousands of homes and buildings were affected flood waters. Several homes dropped off bluffs. In some areas shoreline erosion of 50 to 100 feet deep occurred. Sanitary sewer systems in lakeside communities were affected. Beaches, marinas, and state parks were closed all summer long with unknown economic losses to mainly seasonal businesses. In late May, the Governor imposed a 5-mph speed limit within 600 feet of the Lake Ontario and St. Lawrence River shore. By summer’s end, damage estimates reached $10 Million in Jefferson County. | The Village experienced a w pump failure in the water pollution control facilities which flooded the entire control room. The cost of the damages exceeded over $40,000. |
| November 17-26, 2014 | Severe Winter Storm, Flood (DR-4204) | A winter storm moved into the region, causing temperatures to drop tremendously. Lake effect snow impacted counties bordering Lake Ontario and Lake Erie. Travel restrictions were instituted due to whiteout conditions. The storm produced heavy snowfall, high winds, and blizzard-like conditions, resulting in road closures, travel disruptions, power outages, and damage to public and private property. | The long duration of the stormed was extremely difficult for the Department of Public Works (DPW) and Police Department. The DPW logged over 200 man/equipment hours. The police department responded to several calls which strained the personnel/equipment budgets. |
| October 27 – November 8, 2012 | Severe Storm (EM-3351) | Remnants of Hurricane Sandy brought strong winds and heavy rains. Rainfall amounts of two to five inches were measured across the area with some area creeks reaching bankful. High winds downed trees and power lines. Wind gusts were measured to 60 mph. Utilities reported tens of thousands of customers without power across the entire region. | The Village experienced power outages and downed trees and wires. Roads were closed due to flooding. |

*EM = Emergency Declaration (FEMA)*

*FEMA = Federal Emergency Management Agency*

*DR = Major Disaster Declaration (FEMA)*

*N/A = Not applicable*

### Local Hazard Impacts Assessment

In the table below representatives from the Village of Carthage Hazard Mitigation Planning Team assessed impacts of hazards on buildings, structures, facilities, infrastructure, community assets and systems, people and the local economy.

Table D. Local Hazard Impacts Assessment

|  |  |
| --- | --- |
| **Hazard Name** | **Local Impacts** |
| Dam Failure | Two Dams are identified in the Village; however, no issues have been documented and both are privately owned. If the dam were to fail, only a small portion in the Village would flood, including some infrastructure, such as a state highway and water/sewer system would be impacted. |
| Drought | The Village has two water sources that feed the water systems. A drought would impact the two reservoirs greatly. |
| Extreme Temperature | Extreme Temperatures can cause a strain on the electrical, however there have been no instances in the Village. Village has had a few residents that had to go to a hospital for heat related issues because the Village has a larger elderly population. Jefferson County DSS ensures residents have heat even if they cannot afford it. Freezing pipes have also occurred from extreme temperatures.  The Village does not have a shelter designated. The hospital and fire department are both on generators and could act as a shelter when needed. |
| Flood | The majority of the south side of Village is located within the floodplain. 1998 was the last significant flood and sandbags were brought in and road closures were made. Only back yard flooding has occurred in recent years. |
| Geological Hazards | There are larger Village park fields that are significantly below where the street is and there is a potential for a landslide, but nothing has occurred.  The Village experiences more earthquakes, but no damages. |
| Severe Storm | Strong winds lead to downed trees and powerlines, which results in power outages. |
| Severe Winter Storm | There are larger storms that are depositing more snow, but not as frequently. There also have been issues with residents’ roofs collapsing and freezing pipes. |
| Wildfire | No significant concerns; very small incidents. |

### Vulnerable Community Assets

In the table below representatives from the Village of Carthage Hazard Mitigation Planning team assessed specific impacts to the assets included in the table below. If a community asset is not present in the municipality the Planning Team stated, ‘Not Applicable.’

Table E. Vulnerable Community Assets

| **Community Asset** | **Hazard Impacts and Asset Vulnerabilities** | **Community Asset** | **Hazard Impacts and Asset Vulnerabilities** |
| --- | --- | --- | --- |
| **Agriculture** | Not applicable | **Local Roads** | South Mechanic Street tends to flood during intense precipitation events and in the spring due to snow melt and thaw.  South Clinton Street tends to flood because there is a creek that runs on the backside of the street. Snow melt raises the creek level and contributes to flood issues.  State Route 3 is low lying, has not flooded, but may during an intense precipitation event.  State Route 126 goes along the river. And there are flooding concerns when water heights increase. |
| **Airports** | Not applicable | **Major Employers** | Slack Chemicals is located within the Village - they mostly use the railroad to move things. |
| **Area: Concentration of Businesses** | State Street has a block of businesses and there was a major fire that occurred there. The Village lost about half a block on one side of the street (does not remember what started it). It is now currently a park. | **Medical Centers (non-hospital)** | No known impacts |
| **Area: Concentration of Residences** | The Village has one apartment complex in the middle and another town home complex. No known impacts. | **Natural Resources** | Part of the Village owned area has timber. No known impacts. |
| **Bridges** | The Village has three bridges: two on state highways and one on NYS Route 3. A foot bridge connects island to the Village. State Route bridge would be the first to flood if an event were to occur. | **Neighborhoods** | The South Side of the Village: South Mechanic, South James; South Clinton; South Washington Street are all in or near the floodplain and homes located on these roads experience basement flooding every spring. |
| **City Hall/Courthouse** | The Village Hall (municipal building) has police, zoning, clerk, etc. and has a generator.  The Town of Wilna’s municipal building is located within Village limits but owned by the Town.  The DPW has an equipment barn that they work out of. | **Parks and Recreational Sites** | Main Carthage Park is where the low lying fields are and they flood every spring  Turning Point Park sits right on the river; when the river gets too high, the park is flooded immediately. |
| **College/University** | Not applicable | **Place of Worship** | There are five Churches and State Street has a Catholic Church that has reported wind damage. |
| **Community Centers/Hubs** | Lodge- No known impacts | **Private Property** | No known impacts |
| **Community Activities: major local events including festivals and economic drivers such as beaches, skiing, farming, fishing, etc.** | Big firework festival in July after the 4th of July. No known impacts. | **Public Transportation** | Seniors Bus: Lewis County System does stop in the Village. No known impacts |
| **Cultural/Historic Buildings/Sites** | One building- Buckley Building is declared historical; sits on corner of State Street - no known impacts. Refurbished 15 years ago. | **Schools (K-12)** | Two; Carthage Elementary in the South side - not in the floodplain. It has a backup generator.  Augustinian Academy is privately owned by Catholic Church. No known impacts |
| **Culverts** | No known impacts | **Small Businesses** | No known impacts |
| **Elder-care Facilities** | No known impacts | **Supermarkets/Grocery Stores** | No known impacts |
| **Fire/Police Stations** | Carthage Hall Fire District is located within the Village limits. No known impacts. Has backup power  Second Police Station in the Village is owned by the State. No known impacts | **Transportation - Mobile Asset Storage** | No known impacts: School bus storage is in Town of Champion. |
| **Gas Stations** | One gas station. No known impacts | **Utilities** | No known impacts |
| **Highways** | See above | **Wastewater Treatment Plants** | Water treatment plant on West Street. No flooding concerns. |
| **Hospitals** | Carthage area Hospital. No known impacts. They have backup power. | **Waterfront** | See the neighborhood section and Turning Point Park. |
| **Other** | No known impacts | **Drinking Water Resources** | The Village requires all residents to be on their water system. No known impacts |

### 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. Impacts from a particular hazard may have decreased due to an implemented project or relocation of an asset that was previously at risk. Alternatively, risk may have increased because population has increased in a hazard prone area.

Table F. Hazard Ranking

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Hazard Name** | **Frequency (2011 – present):**  Increased, Decreased, Stayed the Same | **Impacts (2011 – present):**  Increased, Decreased, Stayed the Same | **Description of frequency and impacts (2011 – present):** | **Future Events (present – 2030):**  Will Increase, Decrease, Stay the Same | **2025 Ranking** |
| **Dam Failure** | Stayed the same | Stayed the same | - | Stay the same | Low |
| **Drought** | Decrease | Decrease | Increase in precipitation | Stay the same | Low |
| **Extreme Temperature** | Heat-Increase  Cold-Stayed the Same | Heat- Increase  Cold-Decrease | - | Heat-Increase  Cold-Decrease | Heat – Medium  Cold – Low |
| **Flood** | Increase | Increase | - | Increase | High |
| **Geologic Hazards** | Landslide-Stayed the same  Earthquake-Increase | Landslide-Stay the same  Earthquake-Stay the same | - | Landslide- Stay the same  Earthquake- Stay the same | Landslide – Low  Earthquake – Low |
| **Severe Weather** | Increase | Increase | - | Increase | High |
| **Severe Winter Weather** | Increase | Increase | Larger storm systems | Increase | High |
| **Wildfire** | Stay the same | Stay the same | - | Stay the same | Low |

### Critical Facilities

Table G. Critical Facilities Flood Vulnerability

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Vulnerability** | |
| **1% Annual Chance Event** | **0.2% Annual Chance Event** |
| CARTHAGE ENERGY LLC | Electric Power Plant | X | X |
| TANNERY ISLAND POWER | Electric Power Plant | X | X |
| WEST END DAM HYDROELECTRIC PROJECT | Electric Power Plant | X | X |

*Source: Jefferson County 2024; New York State Department of Environmental Conservation 2023, 2024; Federal Communications Commission 2024; HIFLD 2023, 2024; NYS Department of Health 2024; National Plan and Provider Enumeration System 2023; USACE 2024; NYS Department of Transportation 2023*

The municipality does not have any identified high hazard potential dams within the jurisdiction.

## 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 H through Table 1-L.

### Development and Permitting

Table H. Development and Permitting Capability

|  |  |
| --- | --- |
| **Question** | **Answer** |
| Does your municipality or the county issue building permits for development in your community? | Jefferson County |
| What is your process for tracking building permits? | Jefferson County |
| Are permits tracked by hazard area? (For example, floodplain development permits.) | No |
| Does your community have a buildable land inventory? If yes, please describe. | No |

Table I. 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 | N/A | N/A | N/A | 1 |
| Permits within SFHA | N/A | N/A | N/A | N/A |
| 2020 |  |  |  |  |
| Total Permits | 0 | 0 | 0 | 0 |
| Permits within SFHA | 0 | 0 | 0 | 0 |
| 2021 |  |  |  |  |
| Total Permits | 0 | 0 | 0 | 0 |
| Permits within SFHA | 0 | 0 | 0 | 0 |
| 2022 |  |  |  |  |
| Total Permits | 0 | 0 | 0 | 0 |
| Permits within SFHA | 0 | 0 | 0 | 0 |
| 2023 |  |  |  |  |
| Total Permits | 0 | 0 | 1 | 1 |
| 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 J. Recent Major Development and Infrastructure from 2011 to 2018

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Property or Development Name | Type of Development | # of Units / Structures | Location (address and/or block and lot) | Known Hazard Zones | Description / Status of Development |
| None Identified | | | | | |

Table K. 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 |
| None Identified | | | | | |

Table L. 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 |
| None Identified | | | | | |

## 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 A is responsible for maintaining this information.

### NFIP Statistics

Table M summarizes the NFIP policy and claim statistics for Carthage.

Table M. Carthage NFIP Summary of Policy and Claim Statistics

|  |  |
| --- | --- |
| # Policies | 21 |
| # Claims (Losses) | 28 |
| Total Loss Payments | $78,902.63 |
| # Repetitive Loss Properties (NFIP definition) | 1 |
| # Repetitive Loss Properties (FMA definition) | 0 |
| # Severe Repetitive Loss Properties | 0 |

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

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

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

*Source: FEMA 2024*

### National Flood Insurance Program (NFIP) Flood Vulnerability Summary

The HMP Team provided information on participation in and continued compliance with the NFIP in the table below.

Table N. NFIP Summary

| NFIP Topic | Comments |
| --- | --- |
| Describe areas prone to flooding in your jurisdiction. | The South-Side of the Village |
| Who is the Community Floodplain Administrator (FPA)? Do they serve any roles other than FPA? Do they have adequate training and capacity for this role? | John Poggi, Zoning Enforcement |
| What local department is responsible for floodplain management? | Zoning/Jefferson County |
| Are any certified floodplain managers on staff in your jurisdiction? | No |
| What is the local law number or municipal code of your flood damage prevention ordinance? | Village of Carthage Code Chapter 78 Flood Damage Prevention, 1998. |
| When was the latest effective Flood Insurance Rate Map (FIRM) adopted, if applicable? | 6/17/91 |
| Explain NFIP administration services (e.g., permit review, inspections, engineering capability, GIS, etc.) | Done at the County level (part of building permit process) |
| What are the barriers to running an effective NFIP program in your community, if any? | None |
| Does your floodplain management staff need any assistance or training to support its floodplain management program?  If yes, what type of assistance/training is needed? | None |
| How do you make Substantial Damage determinations? What is the process to make sure these structures are brought into compliance? | Rely on state and county resources. |
| How do you determine if proposed development on an existing structure would qualify as a substantial improvement? | Per Jefferson County Planning Department. |
| How many Substantial Damage determinations were declared for recent flood events in your jurisdiction? | Unsure |
| Does the community track the number of buildings in the floodplain? If so, how many structures are in special flood hazard area (SFHA)? | County tracks permitting; roughly 60 in floodplain |
| How many structures (residential and non-residential) are exposed to flood risk within the community outside of the regulatory maps? | None |
| Does the community maintain elevation records? If yes, please describe. | No |
| Are there any repetitive loss (RL) or severe repetitive loss (SRL) structures in the community? If yes, how many of each category? | One Repetitive Loss Property |
| Describe any areas of flood risk with limited NFIP policy coverage. | No |
| How does the community teach property owners or other stakeholders about the importance of flood insurance? | Banks typically educate interested property owners |
| What digital sources (like the FEMA Map Service Center,  National Flood Hazard Layer) or non-regulatory tools does your community use? | The Town handles FEMA maps; Village does not regularly use |
| 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, Zoning Board considers flood risk |
| When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)? | CAC; Not Documented  CAV: November 21, 2019 |
| Does your community plan to join the CRS program or is your community interested in improving your CRS classification? | No |

## Jurisdictional Capability INVENTORY and ASSESSMENT

Carthage 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 Carthage to identify opportunities for integrating mitigation concepts into ongoing Village procedures.

### Planning and Regulatory Capability and Integration

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

#### Ordinances

Jefferson County has an Emergency Management Ordinance which charges the County with maintaining a Comprehensive Emergency Management Plan to identify local measures that may prevent disasters, to develop local mechanisms to coordinate local resources and personnel for service during and after disasters, support the facilitation of delivery of services to aid citizens and reduce human suffering resulting from disaster, and to provide for short- and long-term recovery and redevelopment after disasters.

Jefferson County has Site Plan and Subdivision Codes that are relevant to development within a certain distance of County interests. Development applications in the areas across the County are sent to County Planning for review to promote coordination of land use decisions and local/county impacts. These County capabilities are inclusive of Carthage and the jurisdiction often partners with the County. To learn more about these capabilities please see Jefferson County’s Jurisdictional Annex.

The HMP Team inventoried its existing ordinances against the full capability list of hazard mitigation-related capabilities. The absence of other kinds of ordinances was not considered a gap in local capabilities. The table below summarizes the ordinances currently in place in the Village.

Table O. Ordinances

| Capability Type | In Place in Municipality | Comments | Responsible Department / Agency / Organization |
| --- | --- | --- | --- |
| Building Codes | Yes, Uniform Fire Prevention and Building Code (Uniform Code) under 19 NYCRR | Jefferson County resumed enforcing the Uniform Code in the Village in 2024. Jefferson County has a full-time department dedicated to only enforcing the Uniform Code which reduces the risk of codes not being adhered to. | Jefferson County |
| Environmental Protection Ordinance | Yes, Chapter 146-5 Zoning of the Code of the Village of Carthage | The Environmental Protection Ordinance consists comprehensive environmental laws enacted by federal, state, and local governments to regulate and protect the environment. | NYS Department of Environmental Conservation Police Department |
| Flood Damage Prevention Ordinance | Yes, Chapter 78 Flood Damage Prevention of the Code of the Village of Carthage | The ordinance reduced risk by mitigating the risks caused by flooding to housing, public facilities, and loss of human life. | Joint Planning Board |
| Growth Management | Yes, Chapter 122-3 Subdivision of Land and Chapter 146-1 Zoning of the Code of the Village of Carthage | The ordinance reduced risk by providing for orderly growth within the community and some control over growth so future development will not be a detriment to the village and its residents. | RACOG and Police Department |
| Post-Disaster Recovery/ Reconstruction Code | Yes, Chapter 146-26 of the Code of the Village of Carthage, Reconstruction after fire or disaster | Zoning will not prevent the reconstruction or replacement of a nonconforming structure to its original configuration when destroyed by fire or other natural disaster. | Police Department and Jefferson County |
| Real Estate Disclosure Requirements | Yes, Property Condition Disclosure Act, NY Code - Article 14 §460-467 | 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. | NYS Department of State, Real Estate Agent |
| Site Plan Code | Yes, Chapter 146 of the Code of the Village of Carthage, Site Plan Review | The Village has a joint planning board with the Village of Deferiet and the Town of Wilna which unifies the process for the communities within the Town of Wilna. | RACOG ZBA |
| Stormwater Management Code | Yes, Chapter 119 of the Code of the Village of Carthage, Stormwater Management | The village is part of a Stormwater Management Coalition. The coalition meets on a regular basis to discuss current rules and regulations regarding stormwater management. | Department of Public Works |
| Subdivision Code | Yes, Chapter 122 of the Code of the Village of Carthage, Subdivision of Land | The village has a joint zoning board of appeals with the Village of West Carthage and the towns of Wilna and Champion which unifies the process for the neighboring communities. | RACOG ZBA |
| Zoning/Land Use Code | Yes. Chapter 146 of the Code of the Village of Carthage, Zoning | The entire Village Police Department has assumed this responsibility. Police officers regularly patrol the village which reduces land use conflicts, promotes traffic safety, protects the historical and recreational attributes of the village. | Village Police Department |

#### Plans

Jefferson County has an Agriculture Plan (Jefferson County Agricultural and Farmland Protection Plan, 2016); Climate Adaptation / Resilience Plan (North Country Regional Sustainability Plan, 2013); Comprehensive Emergency Management Plan; County Emergency Preparedness Assessment (CEPA); Continuity of Operations Plan (Jefferson County Government COOP – COG Plan, 2023); Economic Development Plan (Jefferson County Comprehensive Economic Development Strategy, 2021); Public Health Plan (Jefferson County Public Health Service Strategic Plan 2023-2027); Threat and Hazard Identification and Assessment (THIRA); Tourism Plan; Transportation Plan (Jefferson County Coordinated Transportation Plan for Mobility Services, 2021); and other recent plans that are all countywide in scope and implementation and are applicable to the Village of Carthage. To learn more about these capabilities please see Jefferson County’s Jurisdictional Annex.

The HMP Team inventoried its existing plans against the full capability list of hazard mitigation-related capabilities. The absence of other kinds of plans was not considered a gap in local capabilities. The table below summarizes the plans currently in place.

Table P. Plans

| Capability Type | In Place in Municipality | Comments | Responsible Department / Agency / Organization |
| --- | --- | --- | --- |
| Business / Downtown Revitalization / Development Plan | Yes, 2003 | The primary purpose of a business development plan is to set goals for growth and explain how the Village will achieve them. | Village Board |
| Comprehensive Plan | Yes | A comprehensive plan is a document which illustrates the overall vision and goals of a community. It serves as a guide for the community’s future and often includes anticipated demographics, land use, transportation, and actions to achieve desired goals. Integrating mitigation concepts and policies into a comprehensive plan provides a means for implementing initiatives through legal frameworks and enhances the opportunity to reduce the risk posed by hazard events. Working on another update: anticipated to be completed in May 2025. | Village Board |
| Economic Development Plan | Yes | The purpose of an economic development plan is to foster economic growth and improvement in a region, County, or community | Village Board |
| Public Health Plan | Yes | The purpose of the public health plan is to protect and improve the health of the Village people and the community. | Village Carthage Consolidated Health Board and Departments |

### Administrative and Technical Capability

Jefferson County Code, Fire Prevention and Building Code department currently enforces the New York State Uniform Fire Prevention and Building Code in 31 municipalities that chose not to enforce the Code at the local level, including the Village of Carthage. The Department employs Code Enforcement Officers and clerical staff to ensure that new construction and areas of public assembly conform to the provisions of the State Uniform Code. Proper enforcement of the Code protects property and encourages quality development that enhances public safety and the economy of the County. The office's two major program responsibilities include existing and new building permit administration (i.e.: plan review, issuing permits, construction inspections and issuing certificates of occupancy) and mandated fire safety inspections.

Jefferson County has an Economic Development Commission (Jefferson County Comprehensive Economic Development Strategy); Emergency Management (Jefferson County Office of Fire & Emergency Management), County Department of Planning; County Public Health Department (including Administration and Finance, Home Healthcare Services, Medical Examiner’s Office, Emergency Medical Services); County Highway Department, among others, whose programs and services serve the entire County, including the Village of Carthage. To learn more about these capabilities please see Jefferson County’s Jurisdictional Annex.

The HMP Team inventoried its existing Administrative and Technical Capabilities against the full capability list of hazard mitigation-related capabilities. The absence of other staff was not considered a gap in local capabilities. The table below summarizes staff and personnel resources.

Table Q. Administrative and Technical Capabilities

| **Capability Type** | **In Place in Municipality** | **Comments** |
| --- | --- | --- |
| Maintenance Programs | Yes | The Public Works performs routine maintenance. |
| Mutual Aid Agreements | Yes | County and neighboring municipalities |
| Staff with expertise or training in benefit/cost analysis | Yes | The Clerk/Treasurer is trained. |
| Planning Board | Yes | The Village uses the Town of Wilna Joint Planning Board which has 5 people. |
| Public Works/Highway Department | Yes | Public Works conducts tends to roadways and has ten employees. |
| Zoning Board of Appeals | Yes | RACOG Zoning Board of Appeals has five members. |

### Fiscal Capability

The table below summarizes financial resources available to Carthage.

Table R. Fiscal Capabilities

| **Capability Type** | **Is this funding capability currently in use in the Municipality? If yes, please describe.** |
| --- | --- |
| Community Development Block Grants (CDBG, CDBG-DR) | Yes, developed the Village Park |
| Capital improvement project funding | Yes, Project with Joint Water Sewer Board |
| Authority to levy taxes for specific purposes | Yes, Library |
| User fees for water, sewer, gas, or electric service | Yes, water and sewer fees |
| Impact fees for homebuyers or developers of new development/homes | No |
| Stormwater utility fee | No |
| Incur debt through general obligation bonds | No |
| Incur debt through special tax bonds | No |
| Incur debt through private activity bonds | No |
| Withhold public expenditures in hazard-prone areas | No |
| Other Federal (non-FEMA) funding programs | Yes, ARPA funds for street sweeper |
| FEMA funding programs | Yes, Participate in County HMP |
| Other State funding programs | Yes, CHIPS for road improvements |
| Open Space Acquisition funding programs | No |
| Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution]) | Yes, Local funding for summer recreation program |

### Education and Outreach Capability

The table below includes education and outreach programs and methods already in place that could be used to carry out mitigation activities and communicate information about hazards.

Table S. Education and Outreach Capabilities

|  |  |
| --- | --- |
| **Capability Type** | **Is this education and outreach capability currently in use in the Municipality? If yes, please describe.** |
| Community Newsletter | No |
| Hazard awareness campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, school programs, public events) | Yes, Direct mail and email to water/sewer customers. |
| Hazard mitigation information available on your website | No |
| Local News | Yes, converse to get residents out |
| Natural disaster/safety programs in place for schools | Yes, evacuation drills and tornados |
| Organizations that conduct outreach to socially vulnerable populations and underserved populations | Yes |
| Public information officer or communications office | Yes, Coordinated effort amongst board and management. |
| Social media for hazard mitigation education and outreach | No |
| Warning systems for hazard events | Yes, State level |
| Other | No |

### Hazard Capability Assessment

Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The HMP Team ranked the local government’s capability to address risks and impacts of each hazard based on the risk and capability assessments performed above.

* *Strong: Capacity exists and effectively manages the impacts of this hazard.*
* *Moderate: Capacity exists but is not used or needs some improvement.*
* *Weak: Capacity exists and needs substantial improvement*
* *None: Capacity does not exist.*

Table T. Adaptive Capacity

| **Hazard** | **Strong, Moderate, Weak, None** |
| --- | --- |
| Dam Failure | None. No events in recent history. |
| Drought | None. Not a concern |
| Extreme Temperature | Heat-Weak  Cold-Moderate |
| Flood | Moderate |
| Geological Hazards | None. Not a concern |
| Severe Storm | Weak |
| Severe Winter Storm | Strong |
| Wildfire | Moderate |

## 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.

### Past Mitigation Action Status

The Village did not participate in the last plan.

### Additional Mitigation Efforts

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

* Village has made improvements on South Washington Street in terms of culvert upsizing

### Identified Issues

**The Village of Carthage has identified the following vulnerabilities within their community for mitigation strategy development:**

* There are flood-prone roadways in the Village, including multiple roads which are located in the floodplain (South Mechanic Street, South Clinton Steet, State Route 3, and State Route 126). These streets are located near bodies of water which makes them particularly vulnerable to flooding.
* There are three bridges that are located in the Village. A bridge on State Route 3 would be the first to flood if an event were to occur. The status of the Village’s bridges and causeway in relation to the ability to withstand hazard events is unknown. Failure of bridges or causeways could result in loss to life and limitations to emergency access.
* The Village has been experiencing increasing intensity with windstorm events which have been negatively impacting structures that are in the Village.
* The DPW Barn and the Village owned park experienced wind damage and precipitation damage due to increasing storm intensity and the Village does not have the municipal budget to harden infrastructure from the increase in intense storms.
* Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has one repetitive loss property, but other properties may be impacted by flooding as well.
* There are three facilities that are located in the Village floodplain but may not be Village owned. These facilities include:
* Carthage Energy LLC
* Tannery Island Power
* West End Dam Hydroelectric Project

### Proposed Hazard Mitigation Actions for the HMP Update

Carthage participated in the mitigation strategy workshop and identified hazard mitigation actions to reduce the risks and impacts of hazards the community ranked as high-risk. Hazard risk ranking was specific to each community in the County and was based on quantitative (i.e, analysis of the best available data) and qualitative risk assessment processes (i.e., evaluation of previous occurrences, likelihood of future occurrences and vulnerabilities to people and community services; buildings and critical infrastructure; the natural environment and other local priorities.

Implementation of these actions are dependent upon available funding (grants and local match availability) and local capacity and may be modified or omitted at any time based on the occurrence of new hazard events and changes in local priorities.

Volume I identifies fourteen evaluation criteria for prioritizing the mitigation actions. Below, Table U provides the prioritization criteria score for each proposed mitigation action.

Action 2025-CarthageV-01. Flood Prone Roadways

|  |  |  |
| --- | --- | --- |
| Lead Agency: | Village Public Works; NYSDOT | |
| Supporting Agencies: | County Highway | |
| Hazards of Concern: | Flood, Severe Storm, Severe Winter Storm | |
| Description of the Problem: | There are flood-prone roadways in the Village, including multiple roads which are located in the floodplain (South Mechanic Street, South Clinton Steet, State Route 3, and State Route 126). These streets are located near bodies of water which makes them particularly vulnerable to flooding. | |
| Description of the Solution: | The Village will conduct a flood study to develop specific cost-effective mitigation solutions for flood-prone road systems (roads, bridges, intersections, drainage, etc.) under the leadership of the State for the State-owned roads. | |
| Estimated Cost: | TBD after Flood Study | |
| Potential Funding Sources: | HMGP, FMA, Village Budget | |
| Implementation Timeline: | Within 5 Years | |
| Goals Met: | 1, 2, 4, 6, 7 | |
| 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 increases the Village capabilities to be able to keep roadways open during high precipitation events. | |
| Climate Change Considerations: | A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. | |
| Mitigation Category | Structure and Infrastructure Projects | |
| CRS Category | Preventative Measures, Property Protection, Structural Flood Control Projects | |
| Priority | High | |
| Alternative | Action | Evaluation |
| No action | - |
| Relocate all flood-prone road system | Not feasible |
| Raise all flood prone roads | Cost prohibitive |

Action 2025-CarthageV-02. Bridge Review and Inventory

|  |  |  |
| --- | --- | --- |
| Lead Agency: | Village Public Works; NYSDOT | |
| Supporting Agencies: | County Highway | |
| Hazards of Concern: | Flood, Severe Storm, Severe Winter Storm | |
| Description of the Problem: | There are three bridges that are located in the Village. A bridge on State Route 3 would be the first to flood if an event were to occur. The status of the Village’s bridges and causeway in relation to the ability to withstand hazard events is unknown. Failure of bridges or causeways could result in loss to life and limitations to emergency access. | |
| Description of the Solution: | The Village will consult with an engineer to identify inadequate or vulnerable bridges and causeways within the Village and will work to replace or retrofit the identified bridges and causeways. The Village will also look into applying mitigation measures to the bridge on State Route 3. | |
| Estimated Cost: | TBD after Engineering Study | |
| Potential Funding Sources: | HMGP, FMA, Village Budget | |
| Implementation Timeline: | Within 5 Years | |
| Goals Met: | 1, 2, 4, 6, 7 | |
| Benefits: | This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear and stable bridges 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 bridges. | |
| 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 bridges for evacuations, regular travel, and emergency responses. | |
| Impact on Capabilities: | This action increases the Village capabilities to be able to keep bridges and roadways open during high precipitation events. | |
| Climate Change Considerations: | A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. | |
| Mitigation Category | Structure and Infrastructure Projects | |
| CRS Category | Preventative Measures, Property Protection, Structural Flood Control Projects | |
| Priority | High | |
| Alternative | Action | Evaluation |
| No action | - |
| Relocate all flood-prone bridges system | Not feasible |
| Raise all flood prone bridges | Cost prohibitive |

Action 2025-CarthageV-03. Building Codes Focused on Windstorms

|  |  |  |
| --- | --- | --- |
| Lead Agency: | Planning Board | |
| Supporting Agencies: | Village Public Works | |
| Hazards of Concern: | Severe Storm, Severe Winter Storm | |
| Description of the Problem: | The Village has been experiencing increasing intensity with windstorm events which have been negatively impacting structures that are in the Village. | |
| Description of the Solution: | The Village will update their building codes to include more wind resistant infrastructure for new construction. | |
| Estimated Cost: | Staff Time | |
| Potential Funding Sources: | Village Budget | |
| Implementation Timeline: | Within 5 Years | |
| Goals Met: | 1, 2, 4, 5, 6, 7 | |
| Benefits: | The Village will have structures that are built to withstand stronger winds and will not have as many damages as a result. | |
| Impact on Socially Vulnerable Populations: | Facilities will be built to withstand stronger storms which result in fewer damages and necessary repairs. | |
| Impact on Future Development: | The new building code will address building new construction to withstand new damages. | |
| Impact on Critical Facilities/Lifelines: | Critical facilities will be built to withstand more hazard events which results in a stronger possibility for continuity of operations. | |
| Impact on Capabilities: | This action strengthens the Village’s infrastructure. | |
| Climate Change Considerations: | A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased intense storms with stronger winds. | |
| Mitigation Category | Local Plans and Regulations | |
| CRS Category | Preventative Measures, Property Protection | |
| Priority | High | |
| Alternative | Action | Evaluation |
| No action | - |
| Rely on State | Additional wind protections are not included in the State Code |
| Repair infrastructure as it is damaged | Not cost effective |

Action 2025-CarthageV-04. Wind proofing Village Infrastructure

|  |  |  |
| --- | --- | --- |
| Lead Agency: | Public Works | |
| Supporting Agencies: | Village Administration | |
| Hazards of Concern: | Severe Storm, Severe Winter Storm | |
| Description of the Problem: | The DPW Barn and the Village owned park experienced wind damage and precipitation damage due to increasing storm intensity and the Village does not have the municipal budget to harden infrastructure from the increase in intense storms. | |
| Description of the Solution: | The Village will conduct a study to determine the feasibility of hardening Village owned structures to be more resistant to strong storms and will acquire funding to harden the DPW Barn and the Village owned park from intense windstorm and precipitation damage. | |
| Estimated Cost: | TBD after Study | |
| Potential Funding Sources: | HMGP, Village Budget | |
| Implementation Timeline: | Within 5 Years | |
| Goals Met: | 1, 2, 4, 6, 7 | |
| Benefits: | The Village will have structures that are built to withstand stronger winds and will not have as many damages as a result. | |
| Impact on Socially Vulnerable Populations: | Facilities will be built to withstand stronger storms which result in fewer damages and necessary repairs. | |
| Impact on Future Development: | - | |
| Impact on Critical Facilities/Lifelines: | Critical facilities will be built to withstand more hazard events which results in a stronger possibility for continuity of operations. | |
| Impact on Capabilities: | This action strengthens the Village’s infrastructure. | |
| Climate Change Considerations: | A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased intense storms with stronger winds. | |
| Mitigation Category | Structure and Infrastructure Project | |
| CRS Category | Preventative Measures, Property Protection | |
| Priority | High | |
| Alternative | Action | Evaluation |
| No action | - |
| Rebuild Structures | Not Cost Effective |
| Remove Structures | Facilities are needed |

Action 2025-CarthageV-05. Repetitive Loss Properties Mitigation

|  |  |  |
| --- | --- | --- |
| Lead Agency: | Floodplain Administrator | |
| Supporting Agencies: | Village Administration | |
| Hazards of Concern: | Flood, Severe Storm | |
| Description of the Problem: | Frequent flooding events have resulted in damage to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Village has one repetitive loss property, but other properties may be impacted by flooding as well. | |
| Description of the Solution: | Conduct outreach to 10 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information, and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas). | |
| Estimated Cost: | TBD based on property | |
| Potential Funding Sources: | FMA, HMGP, match from property owners | |
| Implementation Timeline: | Within 5 Years | |
| Goals Met: | 2, 5, 6, 7 | |
| Benefits: | Eliminates flood damage to homes and residences, which creates an open space for the municipality and increasing flood storage. | |
| Impact on Socially Vulnerable Populations: | Removing homes from the floodplain immediately removes the risk to life and property. Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable. | |
| Impact on Future Development: | Increased outreach to homeowners within a flood prone area will limit construction in areas that are prone to hazard events. Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites. | |
| Impact on Critical Facilities/Lifelines: | Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue. | |
| Impact on Capabilities: | Removing the risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed. | |
| Climate Change Considerations: | Climate change is likely to increase the frequency and severity of severe rainfall, flash flooding, riverine flooding, and coastal flooding from sea level rise and storm surge events. Removing structures from the floodplain will reduce the response and recovery costs as a result of these events and decrease the loss of human life as a result of these events. Elevating structures will reduce the recovery costs as a result of these events. | |
| Mitigation Category | Structure and Infrastructure Project | |
| CRS Category | Property Protection | |
| Priority | High | |
| Alternative | Action | Evaluation |
| No action | - |
| Levee around floodplain | Costly, not enough room |
| Deployable flood barriers | Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled. |

Action 2025-CarthageV-06. Critical Facilities in the Floodplain

|  |  |  |
| --- | --- | --- |
| Lead Agency: | Floodplain Administrator | |
| Supporting Agencies: | Village Administration, Facility Owners | |
| Hazards of Concern: | Flood, Severe Storm | |
| Description of the Problem: | There are three facilities that are located in the Village floodplain but may not be Village owned. These facilities include:   * Carthage Energy LLC * Tannery Island Power * West End Dam Hydroelectric Project | |
| Description of the Solution: | The Village will contact the facility owners and will explain the mitigation measures available, including conducting a feasibility assessment to determine what additional floodproofing measures would be needed at the Carthage Energy LLC, Tannery Island Power, and the West End Dam Hydroelectric Project to protect each to the 500-year flood level. Options include:   * Elevation of facility * Floodproofing of facility * Mobile flood barriers   Once the most cost-effective option is identified, the facility owners will work with the Village to carry out the option. | |
| Estimated Cost: | TBD based on chosen option | |
| Potential Funding Sources: | FMA, HMGP, Village Budget | |
| Implementation Timeline: | Within 5 Years | |
| Goals Met: | 2, 5, 6, 7 | |
| Benefits: | Ensures continuity of operations at facilities that are identified as critical to the County and/or municipality. | |
| 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 Village critical facilities by maintaining the critical services that the facilities provide. | |
| 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 | Structure and Infrastructure Projects | |
| CRS Category | Emergency Services, Property Protection | |
| Priority | High | |
| Alternative | Action | Evaluation |
| No action | - |
| Relocate facilities | Relocation is expensive and results in loss or delay of critical services in the immediate area |
| Purchase moveable flood barriers | May not be cost effective |

Table U. Summary of Prioritization of Actions

|  |  | Scores for Evaluation Criteria | | | | | | | | | | | | | | |  | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project Number | Project Name | Life Safety | Property Protection | Cost-Effectiveness | Political | Legal | Fiscal | Environmental | Social Vulnerability | Administrative | Hazards of Concern | Climate Change | Timeline | Community Lifelines | Other Local Objectives | **Total** | | High / Medium / Low |
| Action 2025-CarthageV-01 | Flood Prone Roadways | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **12** | | High |
| Action 2025-CarthageV-02 | Bridge Review and Inventory | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **12** | | High |
| Action 2025-CarthageV-03 | Building Codes Focused on Windstorms | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **13** | | High |
| Action 2025-CarthageV-04 | Wind proofing Village Infrastructure | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **12** | | High |
| Action 2025-CarthageV-05. | Repetitive Loss Properties Mitigation | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **13** | | High |
| Action 2025-CarthageV-06. | Critical Facilities in the Floodplain | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | **13** | | High |

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