



1 JURISDICTIONAL ANNEXES

1.1 JEFFERSON COUNTY

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

1.2 HAZARD MITIGATION PLANNING TEAM

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

Table A summarizes local officials who participated in the development of the annex. Additional documentation of the County'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: Niel Rivenburgh, Deputy Director Address: 753 Waterman Drive Watertown, New York 13601 Phone Number: (315)786-2654 Email: nrivenburgh@jeffersoncountyny.gov	Name/Title: Ryan McIntosh Address: 753 Waterman Drive Watertown, New York 13601 Phone Number: (315)786-2654 Email: rmcintosh@jeffersoncountyny.gov

Additional Contributors

Name/Title: Joseph Plummer – Director of Jefferson County Fire & Emergency Management
Method of Participation: Steering Committee Member, Attended In-Person Meetings, Provided Key Data and Information

Name/Title: Karen Marcum – Commissioner, Jefferson County Department of Social Services
Method of Participation: Steering Committee Member, Attended Meetings regarding Socially Vulnerable Populations, Provided Key Data and Information

Name/Title: Timothy Ruetten – Director, Jefferson County Department of Community Services
Method of Participation: Steering Committee Member, Attended Meetings regarding Socially Vulnerable Populations, Provided Key Data and Information

Name/Title: Michael Bourcy – Director, Jefferson County Department of Planning
Method of Participation:

Name/Title: Andy Nevin – Senior Planner, Jefferson County Department of Planning
Method of Participation: Steering Committee Member, Attended In-Person Meetings, Provided Key Data and Information

Name/Title: George Birth – Stormwater Program Coordinator, Jefferson County Soil and Water Conservation District
Method of Participation: Steering Committee Member, Attended In-Person Meetings, Provided Key Data and Information

Name/Title: James L. Lawrence, Jr. – Superintendent of Highways, Jefferson County Highway Department
Method of Participation: Steering Committee Member, Attended In-Person Meetings, Provided Key Data and Information



Name/Title: Michelle Bunny – GIS Specialist, Jefferson County Planning Department
Method of Participation: GIS Coordination Team, Provided Key Data and Information for Risk Assessment and Hazard Analyses

Name/Title: Grant W. Sussey, C.M. - Director of Aviation, Watertown International Airport (ART)
Method of Participation: Attended Meetings, Provided Key Data and Information

1.3 COMMUNITY PROFILE

1.3.1 Community Classifications

Table B summarizes classifications for community programs available to Jefferson.

Table B. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3 for one- and two-family dwelling 3 for commercial / industrial	2022
Community Rating System (CRS)	No	-	-
Firewise Communities classification	No	-	-
National Weather Service StormReady Certification	Yes	N/A	2022
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
NYSDEC Climate Smart Community	No	-	-
Other: Organizations with mitigation focus (advocacy group, non-government)	No	-	-

N/A = Not applicable

1.3.2 Community Profile

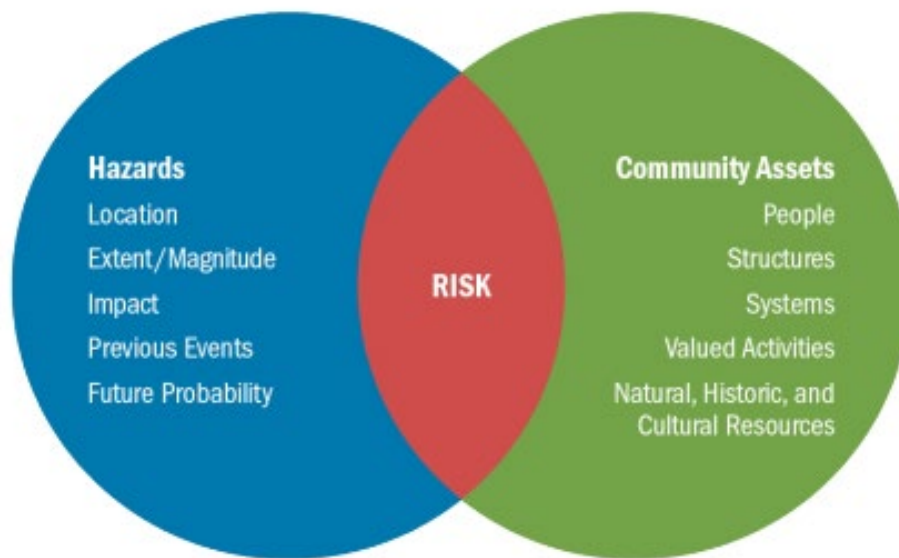
Available in County Profile.

1.4 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 Jefferson'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.



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

1.4.1 Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the County are shown in the applicable hazard profiles. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes.

1.4.2 Previous Event History

The history of natural and non-natural hazard events in Jefferson is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 1-3 provides details on loss and damage in Jefferson during hazard events since the last hazard mitigation plan update.

Over the past few years, Jefferson County has had a significant number of severe weather events (snow, thunderstorm, wind, tornadic activity, etc.) that have resulted in local damage and losses not authorized by FEMA or not rising to the local / State damage thresholds, affecting Jefferson County and at some level all municipalities in the County. Lightning strikes to County radio system infrastructure has occurred twice. Critical infrastructure, roads, culverts, etc. have seen damage, including debris and flash flooding. Winter storms with significant winds and dramatic temperature changes, resulting in travel advisories, road closures, and significant losses to both municipalities and the public (individuals). Loses related to severe weather across the County on numerous occasions estimated to be \$1,000,000 to \$1,500,000 or more cumulatively.



Table C. Presidential Disaster Declaration History in Jefferson

Dates of Event	Event Type (Disaster Declaration)	Summary of Event	Summary of Damage and Losses in Jefferson
August 9, 2024	Severe Storm, Flood	The remnants of Tropical Storm Debby brought widespread impacts to New York, setting rainfall records and triggering warnings around the state. A number of rainfall records fell at locations around the state, including in the North Country. The severe storm caused damage to CSX train tracks in the Adams and Antwerp areas. Governor Kathy Hochul declared a statewide State of Emergency.	No clear data available, State PDA ongoing, Federal PDA ongoing, SBA PDA ongoing, estimated losses \$4,000,000 to \$6,000,000 County wide
July 16, 2024	Severe Storm, Flood	A powerful thunderstorm pushed through the region this afternoon. The National Weather Service warned of heavy rains, damaging winds up to 70 miles per hour. The storm downed trees on Sackets Harbor's Main Street and on Fort Drum. There was flash flooding in Public Square and other parts of downtown Watertown. According to National Grid, more than 17,000 customers in the region are affected by power outages, with thousands more across the North Country also without power.	No clear data available, no State PDA done, local damage mitigated without State or Federal assistance. Estimate losses County wide more than \$1,000,000
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.	County – 2 projects, \$100,602.08 County wide – 12 projects, \$414,889.77
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.	County – 12 projects, \$272,782.06 County wide – 34 projects, \$2,560,132.08
2019-2021	COVID (DR-4480)	Worldwide pandemic, not necessarily a “natural” disaster, but certainly worth listing	County wide – 32 projects, \$23,461,485.60



Dates of Event	Event Type (Disaster Declaration)	Summary of Event	Summary of Damage and Losses in Jefferson
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.	County – 6 projects, \$293,074.10 County wide – 56 projects, \$2,922,922.05
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.	County – 0 projects, \$0.00 County wide – 34 projects, \$406,564.79
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 County does not currently have data available for this event.

EM = Emergency Declaration (FEMA)

FEMA = Federal Emergency Management Agency

DR = Major Disaster Declaration (FEMA)

N/A = Not applicable



1.4.3 Local Hazard Impacts Assessment

In the table below representatives from the County 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	While no major dam failures have occurred recently in Jefferson County, the County contains several dams, including along the Black River. A dam failure could inundate downstream and lowlying areas, roads, and utilities. Fort Drum could be affected depending on the location of the dam failure.
Drought	While not frequent, droughts have impacted Jefferson County agriculture, particularly dairy and crop production. Reduced water levels in reservoirs and wells can affect municipal supply and fire suppression capacity, especially in rural areas. Economic losses may occur in farming and tourism sectors. Prolonged drought can also stress water infrastructure and ecosystems.
Extreme Temperature	The County has experienced extreme cold snaps and heatwaves. In winter, temperatures below -20°F can cause frozen pipes and heating system failures. In summer, heatwaves (including June 2025) have led to increased hospital visits and energy demand, especially affecting elderly and low-income residents.
Flood	Flooding is a recurring and damaging issue in Jefferson County, particularly in Watertown and along the Black River. The August 2024 flooding from Hurricane Debbie caused damage to schools, roads, and homes. Combined sewer overflows (CSOs) are a concern in urban areas, impacting water quality and public health. Floods disrupt transportation, damage utilities, and can displace residents.
Geological Hazards	While rare, minor earthquakes have been recorded in the region. Landslides are possible in hilly areas like the Tug Hill Plateau, especially after heavy rain or snowmelt. These events can damage roads and utilities and isolate rural communities.
Severe Storm	Thunderstorms, hail, and high winds frequently damage roofs, power lines, and trees. These storms can cause localized flooding, power outages, and injuries. Economic impacts include repair costs and business interruptions.
Severe Winter Storm	Jefferson County is part of the Lake Ontario snowbelt and regularly experiences heavy lake-effect snow. Ice storms and blizzards can shut down roads, damage power lines, and isolate communities. Emergency services and hospitals like Samaritan Medical Center must maintain backup power and access during these events.
Wildfire	Wildfire risk is generally low but increasing due to climate change. Brush fires occasionally occur in rural and forested areas. These fires can threaten homes, disrupt transportation, and degrade air quality, especially during dry summers.

For more detailed information about hazard impacts County-wide please see each hazard profile (Volume I) and the risk assessments included in each participating municipality's jurisdictional annex (Volume II).



1.4.4 Vulnerable Community Assets

In the table below representatives from the County Hazard Mitigation Planning team assessed specific impacts to the assets included in the table below. If a community asset is not present in the County 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	<p>The County experiences heavy snow which has led to barn roofs collapses that have trapped livestock. Many smaller farms do not have enough insurance to cover all/most of their losses. Loss of livestock, tractors, and bailers.</p> <p>The County has had public and private property damage in relation to wind, including barns that have been leveled, harvest store grain silos have toppled over and have buckled resulting in a total loss of harvested crops. Grains, oats, and barley crops have been leveled in the summer from windstorms before harvest occurs</p> <p>There have been power losses that have resulted in loss of livestock because milking equipment and storage cannot power on to "service" the cows. Nearly 3,000 cows can be vulnerable to outages, because if they are not milked, they can develop infections and die.</p> <p>In the event of nuclear fallout, (Fitzpatrick, 9 mile 1 and 2), radiation can affect feed and potable water. A preventative measure is indoor coverage of food/water but isn't practical for large scale agriculture. A fallout would also impact corn, soybeans, apples, etc.</p>	Local Roads	<p>Roads that wash out and have to close include:</p> <ul style="list-style-type: none">County Road 125 and County Road 59 have eroded due to coastal action.County Road 69 has eroded due to stream action.
Airports	Watertown International experiences typical impacts from snow, ice, and wind.	Major Employers	Dangerous conditions for employees commuting to/from: NY Airbreak, Fort Drum, Hospital, Car Freshener. Hood, Great Lakes Cheese, Renfrow Tape in dangerous severe winter weather.



Community Asset	Hazard Impacts and Asset Vulnerabilities	Community Asset	Hazard Impacts and Asset Vulnerabilities
Area: Concentration of Businesses	<p>The Black River runs through the heart of Watertown and cuts the city in half. There are inundated areas from the River, including the fairgrounds, business section Newell Street, and the City DPW barn. The stormwater tends to back up into the river and exacerbates flooding.</p> <p>The Village of Dexter has flooding that impacts the lakeshore businesses.</p> <p>NYS Route 3 in Carthage is impacted by ice jams. Flooding into the Village impacts Village infrastructure including residential properties, commercial properties, and roads.</p> <p>The Village of Alexandria Bay, Clayton, Cape Vincent, Sacketts Harbor, Chaumont, and Henderson during the 2017/2019 flood which impacted boardwalks, docks, piers, marinas and lakeshore businesses.</p>	Medical Centers (non-hospital)	No known impacts
Area: Concentration of Residences	<p>Some problem areas are listed above.</p> <p>The Village of Carthage, and parts of West Carthage are in the floodplain according to recent LIDAR. FEMA regulatory maps are in update and many more properties will be included in the SFHA and will require NFIP.</p>	Natural Resources	Harmful Algal Blooms impact fishing, camping, recreation, and tourism. Some beaches have been closed including at Westcott and Southwick, which affects the local economy. BassMasters and other fishing tournaments and ice fishing tournaments are also impacted by the algal blooms and flooding.



Community Asset	Hazard Impacts and Asset Vulnerabilities	Community Asset	Hazard Impacts and Asset Vulnerabilities
Bridges	<p>The Thousands Islands bridge shuts down or has reduced lanes due to high winds. Numerous car accidents have been reported.</p> <p>Interstate 81 in the Town of Ellisburg has experienced ice jams which have closed the interstate southbound for 4-5 days.</p> <p>State Route 3 in the Town of Ellisburg has annual ice jam issues which makes the South Sandy Creek Bridge and State Route 3 impassable, sometimes for weeks. There is a year-round detour that was established due to the regularity of these events.</p> <p>The County owns 140 bridges that have minor issues, including erosion and scour which have been more of an issue than flood inundation. Debris impacts from upstream flows have impacted and damaged bridges.</p> <p>An ice jam flood near County Rd 69 bridge affects six private residents. Fire/rescue has occurred to help the private residences.</p>	Neighborhoods	See Area of Residential Concentration.
City Hall/Courthouse	No known impacts	Parks and Recreational Sites	See other sections
College/University	No known impacts	Place of Worship	No known impacts. *No backup power known for shelters, including warming/cooling center capabilities.
Community Centers/Hubs	<p>The Thousand Island NY/US Welcome Center has active cross border traffic and rarely closes, but it is impacted by snow, rain, ice, wind, power outages.</p> <p>The Cape Vincent Community Center can act as a shelter/place of refuge.</p>	Private Property	See other sections



Community Asset	Hazard Impacts and Asset Vulnerabilities	Community Asset	Hazard Impacts and Asset Vulnerabilities
Community Activities: major local events including festivals and economic drivers such as beaches, skiing, farming, fishing, etc.	<p>Jefferson County fairground, located in the Black River floodplain, hosts the County fair, has outdoor concerts, minor league baseball team games, minor league hockey games, minor league football games, and acts as a local community sports hub for soccer, lacrosse, and other sporting events.</p> <p>Numerous State Parks experience coastal erosion, including: Keywaden, Long Point, Grassy Point, Wellesey, Kring Point, Wescott (some sand dredging has occurred at the State Launch), Cedar Point, Southwicks (have brought in sandbags before), and Burnham.</p> <p>The NYSDEC boat launch in the Town of Lyme has been damaged.</p> <p>The NYSDEC Ski Mountain/Trails, located in both Jefferson and Lewis Counties, have been impacted by high winds, ice storms, and down trees.</p> <p>Jefferson County Soil and Water maintain a snowmobile trail system.</p>	Public Transportation	No known impacts
Cultural/Historic Buildings/Sites	<p>There is a historical site located in Sackett Harbor, called the Madison Barracks, which is a War of 1812 site. High wind events have led to roofs that have blown off and weathering.</p> <p>The Tibbets Point lighthouse has experienced wind and ice damage from Lake Ontario and the St. Lawrence River. The Town of Cape Vincent built a floodwall with NYSDEC.</p> <p>The Boldt Castle experiences wind and high-water events.</p>	Schools (K-12)	Any local impacts are included in the respective municipality's jurisdictional annex.



Community Asset	Hazard Impacts and Asset Vulnerabilities	Community Asset	Hazard Impacts and Asset Vulnerabilities
Culverts	<p>The County has 268 County owned culverts, and many have been impacted by erosion, scour, and debris.</p> <p>Some roads get washed out from undersized culverts resulting in them being closed to traffic and include County Road 87, County Road 189, County Road 95, and County Road 97. County Road 155, County Road 156, and County Road 75 all have two undersized culverts that results in flooding and washouts. County Road 69 has five culverts that are undersized which results in flood damage to private property.</p>	Small Businesses	See other sections.
Elder-care Facilities	No known impacts	Supermarkets/Grocery Stores	No known impacts
Fire/Police Stations	No known impacts	Transportation - Mobile Asset Storage	No known impacts
Gas Stations	No known impacts	Utilities	<p>The Village of Theresa has municipal power.</p> <p>The County partners with the National Grid for preparedness/restoration.</p> <p>The Village of Clayton undergrounded their electric and fiberoptic utilities.</p>
Highways	<p>See local roads section.</p> <p>State Route 3 in the Town of Ellisburg experiences annual ice jam issues, making the South Sandy Creek Bridge and State Route 3 impassable for weeks. There is a year-round detour established due to the regularity of these events.</p>	Wastewater Treatment Plants	<p>The Village of Carthage and West Carthage wastewater facility is located on the river banks within the SFHA and has pump issues related to flooding and high water.</p> <p>The Village of Clayton WWTP is impacted by the St. Lawrence River in 2017/19 during flood events.</p> <p>The City of Watertown WWTP is located in the SFHA which also covers the military installation, Watertown, and six more Towns.</p>



Community Asset	Hazard Impacts and Asset Vulnerabilities	Community Asset	Hazard Impacts and Asset Vulnerabilities
Hospitals	The Samaritan Medical Center experiences excessive stormwater flooding which impacts the basement of the structure. The City stormwater infrastructure is also combined and undersized.	Waterfront	See other sections Waterfront property has erosion, wave action, flooding, high winds, ice/ice spray, and debris from west to east currents.
Other	There are Customs and Border Patrol Coastguard Reporting phones - CBP, Cape Vincent and Clayton. No known impacts	Drinking Water Resources	The City drinking water reservoir is leaking treated water back into the river.



1.4.5 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	Increased – Concern of impact has grown	Increasing risk county-wide due to lack of maintenance. A lot of hydroelectric dams in the County are aging.	Increase	Medium
Drought	Increase	Increase	The Water Table is down and has become more of a regular trend to be down. Drought conditions are moderate to severe with regularity and there is a concern over secondary hazards, such as wildfire (see below). Drought impacts are increasing brushfire incidents and creating conditions for increased wildfire risk.	Increase	High
Extreme Temperature	Extreme Cold- Decreased Extreme Heat- Increased	Extreme Cold- Decreased Extreme Heat- Increased	Winters have trended milder in recent years, however, 2024 has been severe with more ice. The freeze/thaw cycle is always a concern in terms of frozen pipes and flooding. Warmer temps have resulted in ice floating downstream to Lake Ontario to locations that typically do not see ice jam flooding, such as Glen Park. Travelling floating ice will also jam at the mouth of the river entering into Lake Ontario.	Extreme Cold- Decreased Extreme Heat- Increased	Extreme Cold – Medium Extreme Heat – High



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
Flood	Increase	Increase	See Extreme Temperature for flooding concerns in relation to ice jams. The City of Watertown Combined Sewer System issues (see Table E). The Impacts of climate change, including extreme precipitation, leads to deluges, which has created new flood locations. Around 200 feet of the Syracuse to Montreal CSX rail line was washed out.	Increase	High
Geologic Hazards	Earthquake - Increase	Earthquake -	There have been two earthquakes in five years, including one 3.5 magnitude earthquake in the summer of 2023 with the epicenter in the County. Landslides are not a primary hazard of concern. However, land use trends, such as deforestation may have future impacts. There are secondary cascading impacts from coastal erosion, including flood impacts and wildfires.	Earthquake-Increase	Earthquake – High
	Landslide - Stayed the same	Landslide - Stayed the same		Landslide-Increase	Landslide – Medium
Severe Weather	Increase	Increase	-	Increase	High
Severe Winter Weather	Increase	Increase	The ice and lake effect snow has been severe for the County. A season's worth of snow is occurring in a week in some cases. Warmer overall temperatures are resulting in less freezing of the lake, which means the water and air are warmer which creates conditions for increased ice and snowfall, including lake effect snow impacts.	Increase	High
Wildfire	Increase	Increase	There are reduced firebreaks and windbreak due to increased agricultural development on land.	Increase	Medium

1.4.6 Critical Facilities

Table G. Critical Facilities Flood Vulnerability

Name	Type	Vulnerability		
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County of Jefferson

		1% Annual Chance Event	0.2% Annual Chance Event	Addressed by Proposed Action	Already Protected to 0.2% Flood Level
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These are identified in the applicable jurisdiction annexes.

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 County does not have any identified high hazard potential dams within the County.



1.5 GROWTH/DEVELOPMENT TRENDS

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to appreciating a jurisdiction's overall risk to its hazards of concern. Recent and expected future development trends, including major residential/commercial development and major infrastructure development, are summarized in Table H through Table L.

1.5.1 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?	<p>The County enforces the New York State Uniform Fire Prevention and Building Code in 30 municipalities that chose not to enforce the Code at the local level. The Department employs NYS certified Building 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.</p> <p>The Towns and Villages include:</p> <ul style="list-style-type: none">• Town of Adams• Village of Adams• Town of Alexandria• Village of Alexandria Bay• Town of Antwerp• Village of Antwerp• Town of Brownville• Village of Brownville• Town of Cape Vincent• Village of Cape Vincent• Town of Champion• Village of Carthage• Village of Deferiet• Town of Ellisburg• Village of Ellisburg• Village of Glen Park• Town of Henderson• Town of Hounsfield• Town of Leray• Town of Lorraine• Town of Lyme• Village of Mannsville• Town of Orleans• Town of Pamela• Town of Rodman• Town of Rutland• Village of Sackets Harbor• Town of Watertown• Village of West Carthage• Town of Worth
What is your process for tracking building permits?	Tracked through Civic.gov permitting software.



Are permits tracked by hazard area? (For example, floodplain development permits.)	The local municipal floodplain administrators provide input as to hazard prone areas, and County Codes reacts appropriately.
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	This is tracked at the municipal level.			
Total Permits				
Permits within SFHA				
2020				
Total Permits				
Permits within SFHA				
2021				
Total Permits				
Permits within SFHA				
2022				
Total Permits				
Permits within SFHA				
2023				
Total Permits				
Permits within SFHA				
2024				
Total Permits				
Permits within SFHA				

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

Table J. Recent Major Development and Infrastructure from 2011 to 2018

This data is included in each municipality's jurisdictional annexes.

Table K. Recent Major Development and Infrastructure from 2019 to Present

This data is included in each municipality's jurisdictional annexes.

Table L. Known or Anticipated Major Development and Infrastructure in the Next Five Years

This data is included in each municipality's jurisdictional annexes.

1.6 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).



1.6.1 NFIP Statistics

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

Table M. Jefferson NFIP Summary of Policy and Claim Statistics

# Policies	190
# Claims (Losses)	272
Total Loss Payments	\$2,416,072.52
# Repetitive Loss Properties (NFIP definition)	15
# Repetitive Loss Properties (FMA definition)	2
# Severe Repetitive Loss Properties	2

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

1.6.2 National Flood Insurance Program (NFIP) Flood Vulnerability Summary

The National Flood Insurance Program is administered at the municipal level. The County Code Office enforces the flood resistant construction standard of the Building Code of NYS, including plan review and inspections as required. Elevation records are maintained by the County Code Office through the NYS Building Code permitting process upon written notification from the floodplain administrator that the proposed project has been determined to be located within the floodplain.

1.7 JURISDICTIONAL CAPABILITY INVENTORY AND ASSESSMENT

Jefferson 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 Jefferson to identify opportunities for integrating mitigation concepts into ongoing County procedures.



1.7.1 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

Table O. Ordinances

Capability Type	In Place in Municipality	Comments	Responsible Department / Agency / Organization
Building Codes	Yes, 2020 Building Code of New York State (19 NYCRR)	The County enforces the New York State Uniform Fire Prevention and Building Code in 30 municipalities that chose not to enforce the Code at the local level. The Department employs NYS certified Building 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.	Jefferson County Fire Prevention and Building Code Department
Emergency Management Ordinance	Yes, Article 2-B NY State Executive Law	The County is charged under Article 2-B to keep and maintain an updated Comprehensive Emergency Management plan as a framework to minimize the effect of disasters by identifying appropriate local preparedness, mitigation, response, and recovery measures to minimize or lessen the impact of potential natural and man-made disasters. The intent of the CEMP is 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.	Fire & Emergency Management
Environmental Protection Ordinance	No	Local municipalities enforce their environmental protection laws and ordinances, as well as supported by NY State DEC.	-
Flood Damage Prevention Ordinance	No	Local municipalities enforce their flood damage prevention laws and ordinances	-
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, New York General Municipal Law (GML), Article 12-B, §239	The GML §239 m and l requires that site plan applications within a certain distance from County interests are referred to County Planning for review to promote coordination of land use decisions and local/county impacts.	County Planning Board



Capability Type	In Place in Municipality	Comments	Responsible Department / Agency / Organization
Stormwater Management Code	Yes, USEPA Phase II Stormwater regs (CFR 40 Sections 9, 122, 123, and 124) NYSDEC SPDES General Permit for Stormwater Discharges from MS4s.	The purpose of a stormwater management code is to protect water quality, enhance water availability, and reduce flooding potential through effective stormwater management.	JC Soil & Water Conservation District, JC Planning & Highway Departments
Subdivision Code	Yes	The GML §239n requires that subdivision applications within a certain distance from County interests are referred to County Planning for review to promote coordination of land use decisions and local/county impacts.	-
Zoning/Land Use Code	Yes, New York General Municipal Law (GML), Article 12-B, §239	The GML requires that certain types of municipal planning, zoning and subdivision projects be referred to County Planning for review prior to local action being taken. The requirement seeks to promote coordination of land use decision-making and to enhance consideration of potential inter-municipal and county-wide impacts. This requirement is outlined in Article 12-B of the GML, §239 l, m, and n. This process is commonly referred to across New York State as the "GML 239 referral", the "GML 239 review", or simply the "239 review" process. In Jefferson County the responsibility for Section 239m reviews has been given to the Jefferson County Planning Board. This provision applies to development that is within 500 feet from the municipal boundary of any city, village, or town; the boundary of any existing or proposed County or State park or recreation area; County or State roads rights-of-ways; existing or proposed rights-of-way of a stream or drainage channel owned by the County; existing or proposed boundary of County or State land on which a public building or institution is situated; and the boundary of a farm operation located in an agricultural district.	County Planning Board

Plans

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
Agriculture Plan	Yes, Jefferson County Agricultural and Farmland Protection Plan, 2016	In 2002, the Jefferson County Agricultural and Farmland Protection Board prepared an Agricultural and Farmland Protection Plan for Jefferson County. That Plan has been used over the years as the basis for implementing many programs and projects that have benefited and enhanced agriculture in the County. Since that time though, the County has seen many demographic, economic, technologic and land use changes that have, and will continue to influence agriculture. This new, updated plan will give the County a long-term vision and direction to guide policies and programs that can enhance agriculture; strategies to maintain agriculture as a critical land use and economic driver; a framework for organization and collaboration to promote existing and new farm operations; identification of potential project partners and sources of funding; and data, maps, and other information that can be used to support agricultural economic development, public relations, marketing, grant writing, and other programs related to agriculture.	Department of Planning
Climate Adaptation / Resilience Plan	Yes, North Country Regional Sustainability Plan, 2013	The North Country Regional Sustainability Plan (the Plan) was developed under the auspices of the Cleaner, Greener Communities (CGC) Sustainability Planning Program, a statewide initiative to develop sustainability strategies through regional planning. This Plan is designed to be regional in scope and direction and provide guidance, rather than be prescriptive or regulatory in nature. It is intended to provide a framework for a long-term sustainability vision for the North Country region of New York State, which encompasses the seven northern counties of Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, and St. Lawrence. The Plan was created to bring the region together, to create the basis for broader action through increased funding for projects and formalizes a process to actively promote sustainability within the region.	North Country Planning Consortium
Comprehensive Plan	No	Individual municipalities in the County have Comprehensive Plans.	-
Continuity of Operations Plan	Yes, Jefferson County Plan for Operations in the Event of a Public Health Emergency Involving a Communicable Disease, 2021 / County Government COOP – COG Plan (2023)	The Public Health plan is pertinent to a declared public health emergency, involving a communicable disease, in the State of New York which may impact government operations. The plan was developed based on best practices, and guidance available largely as a result of the Coronavirus pandemic. The plan is intended to provide guidance for future public health emergencies involving communicable diseases. The County COOP / COG plan was developed in volume I (overall County plan), with volume II (the annexes for each participating County Department level plan), to ensure that essential functions of each	Human Resources & Public Health / Fire & Emergency Management / County Admin



Capability Type	In Place in Municipality	Comments	Responsible Department / Agency / Organization
		participating Department can continue to support their vital services and public interfaces.	
Capital Improvement Plan	Yes, Annual Budget, Appendix F – Capital Plan, 2024	County entities will submit desired capital projects to the Board of Legislators 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.	Board of Legislators
Disaster Debris Management Plan	No	The County does not have a disaster debris management plan. The County does have an agreement in place with an on-call sub-contractor to support disaster level debris management.	-
Economic Development Plan	Yes, Comprehensive Economic Development Strategy, 2021	<p>The Comprehensive Economic Development Strategy plan is intended to be used at varying levels to help direct integrated economic development programming and leverage funding for local economic and community development initiatives. Based on the data analysis, stakeholder engagement, market analysis and an understanding of Jefferson County's capacity within the realm of economic development and workforce development, the following economic development imperatives summarize the driving themes behind the goals of this CEDS.</p> <ul style="list-style-type: none">• Grow from within to support existing industries and grow the entrepreneurial culture/pipeline.• Continue to develop the county's downtowns into destinations with a range of food/retail/entertainment/housing options that generate economic activity and support a sense of place that embraces who and what Jefferson County represents.• Support business retention, local expansion, and innovation efforts of existing major employers in legacy industries.• Continue to address workforce needs of existing and new employers through partnerships and innovative solutions that engage students to see the possibilities for them to grow careers in the region.• Work in partnership with surrounding counties, where possible, to deliver key economic development functions.	Comprehensive Economic Development Strategy Committee
Emergency Operations Plan	Yes, Comprehensive Emergency Management Plan (2003 under review), Applicable annexes to the comprehensive plan (varying	The County is charged under Article 2-B to keep and maintain an updated Comprehensive Emergency Management plan as a framework to minimize the effect of disasters by identifying appropriate local preparedness, mitigation, response, and recovery measures to minimize or lessen the impact of potential natural and man-made disasters. The intent of the CEMP is to identify local measures that may prevent disasters, to develop local mechanisms to coordinate local resources and personnel for service during and	Fire & Emergency Management / Public Health



Capability Type	In Place in Municipality	Comments	Responsible Department / Agency / Organization
	dates and applications	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.	
Floodplain Management or Watershed Plan	Yes, Sandy Creeks 9E Watershed Management Plan, In Development	<p>As climate and land use changes continue to affect the Sandy Creeks Watershed, an increasing number of stakeholders have expressed concerns over potential water quality impacts. A nine element watershed plan (9E plan) is being developed by the Jefferson, Oswego, and Lewis County Soil and Water Conservation Districts (SWCDs) in collaboration with Upstate Freshwater Institute (UFI) and the Tug Hill Commission to 1) discover potential water quality impacts; 2) inform management decisions; 3) improve grant funding opportunities; and 4) to protect water quality in order to avoid the need for regulatory action such as the implementation of a Total Maximum Daily Load (TMDL).</p> <p>The extensive testing necessary to develop the plan will highlight any E. coli, nutrient, or sediment load issues the watershed may have, allowing water quality goals to be set and the identification of the best management practices (BMPs) best suited to achieve these goals.</p>	Tug Hill Commission
Habitat Conservation / Wildlife Management Plan	Yes, Various Habitat Management Plans, (2016, 2017, 2018, 2019, 2021, 2022)	<p>The goal of Habitat Management Plans is to guide habitat management decision-making on those areas to benefit wildlife and facilitate wildlife-dependent recreation. Habitat Management Plans guide management for a ten-year time frame, after which the plans and progress on implementation will be assessed and Habitat Management Plans will be modified as needed.</p> <p>Habitat Management Plans have been written for a variety of locations within Jefferson County. Each Plan identifies specific target species and habitat goals. The following locations have Habitat Management Plans:</p> <ul style="list-style-type: none"> • Ashland Flats (2016) • Black Pond (2019) • Collins Landing (2019) • Cranberry Creek (2017) • Dexter Marsh (2022) • French Creek (2022) • Honeyville (2017) • Lakeview (2018) • Indian River (2017) • Perch River (2021) • Point Peninsula (2022) 	New York State Department of Environmental Conservation
Open Space Plan	Yes, 2016	The Open Space Conservation Plan (OSP) is a comprehensive statewide plan that describes current open space conservation goals, actions, tools, resources and programs administered by state and federal agencies and conservation nonprofits. Since	NY State



Capability Type	In Place in Municipality	Comments	Responsible Department / Agency / Organization
		1992, the Open Space Conservation Plan has served as the blueprint for the State's Open Space Program, guiding the investment of land protection funds from the Environmental Protection Fund. As required by law, the Plan is updated periodically, relying heavily on the work of the nine Regional Advisory Committees. The Plan includes recommendations on how state and local governments can protect and enhance riparian areas, coastal areas, food plains and forests as part of climate-change adaptation. All this can be done while improving wildlife habitat and creating recreational opportunities.	
Post-Disaster Recovery Plan	No	County Comprehensive Emergency Management Plan addresses short- and long-term recovery. Perhaps (likely) not to the extent necessary. Both short- and long-term recovery are typically driven by NY State DHSES Recovery Section	-
Public Health Plan	Yes, Community Health Assessment and Community Health Improvement Plan, 2022	The community health assessment (CHA) identifies key health needs and issues through systematic, comprehensive data collection, and analysis. The community health improvement plan (CHIP) utilizes the results of community health assessment activities and the community health improvement process to develop a long-term plan to address public health concerns in the community.	Public Health Service
Stormwater Management Plan	Yes, USEPA Phase II Stormwater regs (CFR 40 Sections 9, 122, 123, and 124) NYSDEC SPDES General Permit for Stormwater Discharges from MS4s.	Established in 2014, the JC Stormwater Coalition comprised of City of Watertown, seven surrounding communities and Jefferson County. The coalition works collaboratively to meet stormwater management regulations; achieve water quality goals; and promote awareness and stewardship of water resources in urban areas.	JC Soil & Water Conservation District, JC Planning & Highway Departments
Threat and Hazard Identification and Risk Assessment (THIRA)	Yes, County Emergency Preparedness Assessment (CEPA) – 2021, in support of the State THIRA	County participates in the NY State CEPA (County Emergency Preparedness Assessment) when called upon. The CEPA is managed and facilitated by NY State OEM, with stakeholders from all applicable local, county, and community partners. The intent of the CEPA is to inform the State on their Statewide THIRA. Identified hazards and the applicable preparedness, mitigation, response, and recovery capabilities are evaluated and rated, with improvement metrics identified.	Fire & Emergency Management / NY State Office of Emergency Management
Tourism Plan	Yes, Comprehensive Economic Development Strategy, 2021	Appendix D of the 2021 Jefferson County Comprehensive Economic Development Strategy discuss Tourism and Recreation within the County. The 1000 Islands International Tourism Council (the Council) developed recommendations to support tourism businesses across the region, attract	Comprehensive Economic Development Strategy Committee



Capability Type	In Place in Municipality	Comments	Responsible Department / Agency / Organization
		<p>investment in tourism assets, and contribute to Jefferson County's overall economic development goals. This work will directly feed into the county's Comprehensive Economic Development Strategy (CEDS). The following components were completed to inform these findings and recommendations.</p> <ul style="list-style-type: none">• Business intelligence calls that reached a range of tourism businesses including lodging, entertainment, restaurants, and recreation.• A lodging and short-term rental market snapshot.• Research on tourism market trends that apply to the North Country and Jefferson County's landscape.• A labor market analysis on tourism jobs and occupations (included in CEDS documents).	
Transportation Plan	Yes, Jefferson County Coordinated Transportation Plan for Mobility Services, 2021	<p>Jefferson County's Coordinated Transportation Plan for Mobility Services was prepared to identify cost-effective approaches to address public transportation gaps; minimize the duplication of transportation services; and help improve the coordination of transportation services for persons with disabilities, older residents, college students and Jefferson County residents seeking access to employment, education, medical appointments, food sources, recreation and social destinations.</p> <p>This Plan also prioritizes how federal, and state public transportation resources will be utilized by the Metropolitan Planning Organization, City of Watertown, Jefferson County, and third-party vendors. The Plan will include adjustment to the CitiBus fixed route system to extend services. The extension of services would allow for a County-Wide Public Transportation System to be developed in Jefferson County. With additional services such as FMLM and Rides to Recovery, the enhancement of the CitiBus system and a county-wide transportation system would greatly enhance the well-being of the Jefferson County population and surrounding areas by adding ease of access to essential life needs such as medical, education, employment, and food sources.</p>	Planning Department
North Sandy Pond Management Plan	Yes, 2023	<p>This Lake Management Plan for North Sandy Pond focuses on the history of the embayment and its watershed, trends in water quality, and an evaluation of sources of nutrients based on best available information. Recommended actions include a continued focus on water quality monitoring to determine nutrient input sources and reduce external nutrient inputs, community education to implement best management practices for the overall benefit of the lake, and documenting HABs and their potential toxins during blooms to protect public health and wildlife.</p>	Town of Sandy Creek, Oswego County



Capability Type	In Place in Municipality	Comments	Responsible Department / Agency / Organization
Fort Drum Region Transit Needs Assessment	Yes, 2011	This transportation and mobility needs assessment began in April 2011 and concluded in October 2011. Research methods included assessments of demographics and employment trends, an origin-destination and user preference survey, focus groups with transportation providers and potential customers, and analysis of funding options. From this process has emerged a picture of future transit ridership in the region and corridors identified for service. Important to keep in mind is that “transit” has many meanings and service delivery options beyond a bus. A primary goal of this study is providing increased mobility options – to both link people to necessary services as well as improve quality of life – through innovative and flexible service options. These include carpools, vanpools, volunteers, and combining clients on one vehicle, among others.	Fort Drum Regional Liaison Organization
Fort Drum Growth Management Strategy	Yes, 2008	This Growth Management Strategy utilized a combination of conceptual growth model forecasting (20-year horizon), on-the-ground knowledge of local communities and Fort Drum, and infrastructure and development patterns, and identified a number of conclusions about current and future impacts posed by growth.	Fort Drum Regional Liaison Organization
Jefferson County Public Health Service Strategic Plan	Yes, 2023-2027, 2023	The strategic plan will serve as a working document for the agency as it strives to achieve its vision and mission. From the mission and vision, specific priority areas, goals, objectives, and activities were developed. Annual review and revisions to the plan will be made and communicated to staff, the community and partners, and the County Legislature to illustrate how the JCPHS is achieving what it has committed to do. Unless otherwise noted, it is expected that each measurable strategy will be evaluated quarterly by the Strategic Planning Team, and through monitoring by use of the Vision, Mission, Services, Goals (VMSG) Performance Management System.	Public Health Service

1.7.2 Administrative and Technical Capability

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
Chief Building Official	Yes	Jefferson County has seven building officials. Director of Jefferson County Code Enforcement



Capability Type	In Place in Municipality	Comments
Code Enforcement	Yes	The County enforces the New York State Uniform Fire Prevention and Building Code in 30 municipalities that chose not to enforce the Code at the local level. The Department employs NYS certified Building 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.
Economic Development Commission/Committee	Yes	The Comprehensive Economic Development Strategy (CEDS) Committee develops and maintains the Jefferson County CEDS Plan for use by various agencies in their economic development programs. The Committee's work includes partnerships with the Jefferson County Industrial Development Agency (JCIDA), and other local economic development interests to identify and promote local economic development strategies. The Planning Department coordinates with the Federal Economic Development Administration (EDA) on behalf of the CEDS Committee to profile and endorse local capital projects that might be eligible for funding assistance.
Emergency Management	Yes	<p>The Jefferson County Office of Fire & Emergency Management serves to enhance the safety and security of the citizens and visitors of Jefferson County by serving as the lead coordinating agency for regional preparedness and emergency management efforts. By partnering with local leaders in business, government, and the public, the Department builds sustainable communities and programs. The office supports the efforts of local emergency service providers by coordinating training programs, facilitating interagency operational planning, and providing operational support via various specialized response teams.</p> <p>The Office is responsible for all Emergency Management functions, Fire Coordinator duties as well as overseeing the Jefferson County 911 Center. The Office's 911 Dispatch Center provides state-of-the-art, county-wide radio communications and computer-aided dispatch services to all emergency service agencies and receives and manages 911 telephone calls and informational calls in a prompt, courteous and professional manner.</p>
Environmental Specialist	Yes	Department of Fire and Emergency Management
Grant Writer	Yes	Department of Fire & Emergency Management, Department of Planning, Department of Health.
Maintenance Programs	Yes	The Highway department maintains the roads in the County Highway system. The Stormwater Management Program is managed through the Department of Planning.
Mitigation Planning Committee	Yes	Through the Hazard Mitigation planning project there is a Stakeholders group and a Planning Partnership group that will continue to support issues related to hazard mitigation.
Mutual Aid Agreements	Yes	The County has a mutual aid plan for Fire Services as required by NY State Office of Fire Prevention and Control managed by the Office of Fire & Emergency Management. The Fire Mutual Aid Plan incorporates Federal Fire units from the Fort Drum Military Installation. There is also an Emergency Medical Services mutual aid agreement in place through the County EMS Office (Public Health). It too incorporates Federal EMS units from the Fort Drum Military Installation. There is a comprehensive mutual aid, or Shared



Capability Type	In Place in Municipality	Comments
		Services plan for Highway / Public Works, that incorporates every municipality in Jefferson County.
Personnel skilled or trained in website development	Yes	Information Technology Department with support from all departments as it relates to information management.
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Department of Planning
Staff with expertise or training in benefit/cost analysis	Yes	Administration, Treasurers Office
Professionals trained in conducting damage assessments	No	Limited capability in Fire & Emergency Management and Highway Department as it relates to preliminary damage assessment secondary to previous flooding and weather events. No formal training, just experience.
Planners or engineers with knowledge of land development and land management practices	Yes	Department of Planning
Planning Board	Yes	<p>The County Planning Board performs site plan review and special use permits.</p> <p>The Planning Department provides staff assistance monthly in support of the County Planning Board's authorized functions. In addition to monthly meeting administration, most of the Department's assistance is dedicated to NYS General Municipal Law, section 239-m project reviews for development projects and local zoning actions referred by municipalities.</p>
Planning Department	Yes	<p>The Department serves as technical staff to the County and its municipalities primarily in four major program categories</p> <ul style="list-style-type: none"> County Planning and Economic Development Community Planning and Development Resource and Environmental Management Information, Demographic and Data Services <p>In support of a multitude of specific County programs, staff provides project development and administration, grant writing, and research and analysis services. Specific program areas include Community Development Block Grants, North Country HOME Consortium, County Planning Board administration, Comprehensive Economic Development Strategy (CEDS) Committee, Geographic Information System (GIS) Services, Fort Drum-related growth and development technical services, Agriculture and Farmland Protection Board administration, and Demographic and Census services. Many other County-wide project and program areas are also administered.</p> <p>Also, the Department provides local government technical assistance to various town and village boards in the development and implementation of comprehensive plans, land use regulations, and community and economic development plans and strategies.</p> <p>These services are intended to assist and guide efforts at both the County and local levels, to develop and implement planning and development programs which will have positive impacts on the area's economy, environment, rural character, and land uses.</p>



Capability Type	In Place in Municipality	Comments
Public Works/Highway Department	Yes	The Highway Department maintains the roads and bridges within the County Highway system, which includes 555 miles of road and 450 drainage structures. The Department offers additional services to Towns and Villages, including equipment rentals, survey work, and technical assistance (highway and bridge design, permit applications, drainage calculations, traffic engineering, and construction practices).
Surveyor(s)	Yes	Highway Department
Other: Community Services Board	Yes	<p>One of the primary responsibilities of the LGU under Article 41 of the Mental Hygiene Law (MHL) is to develop and annually submit a Local Services Plan (LSP) to each NYS mental hygiene agency. The Mental Hygiene Agencies are the Office of Addiction Services and Supports (OASAS), the Office of Mental Health (OMH) and the Office for People with Developmental Disabilities (OPWDD). The LSP establishes the local priorities, needs and outcomes for the LGU in the coming year and the metrics used to measure the outcome. The local plans are approved by the LGU's Community Services Board and are subsequently submitted, approved and "certified" by the state agencies.</p> <p>Membership shall include fifteen members; whenever practical, a licensed physician, a licensed psychologist, but at least two (2) members shall be licensed physicians, and a demonstrated interest in the field of services for the mentally disabled. There are three (3) subcommittees, which report to the Community Services Board. The Mental Health Subcommittee shall have no more than eleven (11) members; the Developmental Disabilities, and the Alcohol/Substance Abuse Subcommittees shall have no more than nine (9) members. Of the eleven (11) on the Mental Health Subcommittee, two (2) shall be recipients of mental health services and two (2) shall be family members of recipients. Three (3) members of each subcommittee shall be members of the Community Services Board.</p>
Other: Buildings and Grounds	Yes	The Buildings & Grounds Department is responsible for the general maintenance, overall upkeep and security of County owned buildings totaling over 537,000 square feet. Established by Local Law #2 of 1993, the department has evolved into a full service, nearly self-sufficient department performing all HVAC repairs and mid-size renovation projects as well as preventive and general maintenance. Security is provided to our buildings seven days a week via fixed post guards during the day and roving watchmen at night. The unique roll of the department is unlike any other. In addition to everyday general maintenance, we work very closely with every other county department to determine their needs, make necessary repairs and renovations which often results in increasing efficiency within these departments. The department also serves as the custodian of the Capital Plan as it pertains to the improvement of County owned buildings and grounds.
Other: Recycling and Waste Management	Yes	The Department provides County-wide solid waste planning, technical assistance, recycling, and solid waste management services as directed by the County Board of Legislators to the residents, businesses, and municipalities of Jefferson County.



Capability Type	In Place in Municipality	Comments
Other: Watertown International Airport (ART)	Yes	<p>The Watertown International Airport (ART) serves as a vital hub for General and Commercial Aviation needs across Northern New York, the Thousand Islands region, Southern Ontario, and the Fort Drum area. The airport features two runways with full parallel taxiways, advanced navigation aids, multiple instrument approach procedures, and real-time weather reporting systems.</p> <p>The airport is included in the US Congress's National Integrated Airport Systems plan (NPIAS), it is considered vital to national air commerce and defense. Additionally, the airport is designated as a Minimum Operational Network (MON) by the Federal Aviation Administration (FAA) due to its strategic location and navigation aid equipment that can be used by aircraft during Global Position System (GPS) Outages.</p> <p>The airport accommodates disaster and Emergency response aircraft and helicopters for agencies such as the NY State Police Aviation, US Coast Guard, US Army, US Customs, and private operators.</p> <p>Currently undergoing a major terminal construction (set to be completed by September 2026), ART will soon offer enhanced facilities, including additional gates, a jet bridge, a restaurant, automated baggage claim systems, and increased circulation space to improve passenger comfort and convenience.</p> <p>American Airlines provides commercial air service with two daily flights to and from Philadelphia International Airport (PA), offering seamless access to global destinations. The airport supported over 47,000 passengers in 2024, reflecting its essential role in regional connectivity.</p> <p>Beyond passenger services, ART hosts a range of aviation operations and facilities, including a commercial medical evacuation helicopter station, two flight schools, Aircraft Rescue Fire Fighting Station (index b), a Full-Service Fixed Base Operator (FBO), and multiple storage hangars. The airport is designated Airport of Entry (AOE) allowing it to accept international flights. International Private and military flights from Europe and Asia have been accommodated at the airport.</p> <p>Watertown International Airport is committed to meeting the diverse aviation needs of the community and supporting Fort Drum and the broader region.</p>

1.7.3 Fiscal Capability

The table below summarizes financial resources available to Jefferson County.



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, Housing
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Unknown
Other Federal (non-FEMA) funding programs	CHIPS, ARPA,
FEMA funding programs	Public Assistance, State Homeland Security Program (SHSP), EMPG, SLETPP, Stone Garden (DHSES), Hazard Mitigation Grant Program (HMGP), Public Health? DSS?
Other State funding programs	BridgeNY, Rural Transportation Funds 5311, NYS Ready, PSAP (Public Safety Answering Point), SICG (State Interoperability Communications Grant) GIVE (Gun Intervention Violence Program), STRIVE (Domestic Violence Program), Domestic Terrorism Prevention Program Public Health? DSS?
Open Space Acquisition funding programs	
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Yes, Federal grant for US Route 11



1.7.4 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, The County can utilize its various forms of social media, the County website, Prepare Jefferson County NY app, Public Health Press Releases, County Outreach events, the Reverse 911 program (Hyper-Reach), authorized FEMA IPAWS user, and can utilize the State's NY Alert system.
Hazard mitigation information available on your website	Yes, This information is available on the Emergency Management, Planning, and Public Health webpages.
Local News	No
Natural disaster/safety programs in place for schools	Yes, Comprehensive School Safety program, managed and supported by BOCES (Board of Cooperative Educational Services).
Organizations that conduct outreach to socially vulnerable populations and underserved populations	Yes, Office for the Aging, Department of Social Services, Veterans Service Agency, and Public Health Service
Public information officer or communications office	Yes, County Administration, supported by Health Department, Fire & Emergency Management
Social media for hazard mitigation education and outreach	Yes, The County and its Departments have various social media accounts on sites such as Facebook, X (formerly Twitter), YouTube, Instagram, and LinkedIn.
Warning systems for hazard events	Yes, Reverse 911 (Hyper-Reach) allows for messaging to land line phones in the 911 data base as well as cellular phones registered to an address in the jurisdiction. Jefferson County is an authorized user of the FEMA IPAWS system with the capability of pushing 90 and 360 character wireless emergency alerts. The Prepare Jefferson County NY app allows Jefferson County Departments of Fire & Emergency Management and Public Health to connect with residents & visitors, providing information quickly to anyone with a smartphone.
Other	No



1.7.5 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	Weak
Drought	None
Extreme Temperature	Weak – The County has no heating/cooling shelters and a limited capacity due to volunteer staffing to facilitate sheltering.
Flood	Moderate - NYSDOT, highway departments, and fire departments have significant capacity to respond to flood events.
Geological Hazards	Earthquake - Weak, the building standards need improvement, as some structures were built before current standards Landslide - None, there are no proactive measures in place in part because it has not historically been a concern/occurrence.
Severe Storm	Moderate – The County participates in proactive activity and has a high-functioning capability to communicate/disseminate information to the community.
Severe Winter Storm	Moderate – The County participates in proactive activity and has a high-functioning capability to communicate/disseminate information to the community.
Wildfire	Moderate - All fire fighters are volunteers except for the City of Watertown. There are some local mutual aid agreements and statewide mobilization/NY Responds.

1.8 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.

1.8.1 Past Mitigation Action Status

Table 2-1 indicates progress on the County's mitigation strategy identified in the 2011 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.



Status of Previous Mitigation Actions

Jefferson County-01	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Fire and Emergency Management
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Utilize a web-based mass notification program using reverse 911 technology to notify residents and businesses of up-and-coming emergencies
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	County is on-line with reverse 911 system (Hyper-Reach) as well as an authorized FEMA IPAWS user. In addition, the preparedness mobile app allows for real time messaging for immediate notifications. Mass notification is always evolving. Although the County is functioning with a variety of alerting tools, this must continue to remain a mitigation measure as the threat landscape and technology is ever-changing.
If discontinue, explain why	-



Jefferson County-02	
Hazards Addressed	Severe Storm
Lead Agency / Department	Jefferson County Fire and Emergency Management
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Installing lightning protection to emergency communications infrastructure
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	At present, and upon the 2021 implementation of the microwave and TLMR radio system, all towers in Public Safety communications infrastructure have lightning mitigation measures. To the extent practical at present, lightning mitigation exists, however, with lightning mitigation will never be complete. As technology changes, so must the County. Even with lightning mitigation measures, the county has still encountered lightning strikes, mitigation reduced damage, did not take down the system, but still resulted in loss.
If discontinue, explain why	



Jefferson County-03	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	NYS Department of Transportation
Action Location	State Rt. 283/State Rt. 342 Town of LeRay
Summary of Original Problem Summary of Solution (Project)	Installation of batteries and solar-powered charging system to ensure operation of traffic control device on State Rt. 283/State Rt. 342 Town of LeRay during power outages.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	Complete
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	-
If discontinue, explain why	NY State DOT has taken the issue as far as they are willing.



Jefferson County-04	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Fire and Emergency Management
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Installation and implementation of a web-based disaster management software to allow efficient management and control of disastrous situations.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	NY State released NY Responds to the County for statewide COP (for the State's benefit, not the County's) and interaction and coordination with the State and out of county resources and missions. That works fine for meeting the needs of the State for visibility and support, however, finding the appropriate solution for the County continues to be a struggle, as we deal with the State, US Army, Coast Guard, Customs, and Border Patrol. A unified COP platform continues to be a challenge. Finding the appropriate solution and funding for the County when dealing with the State, US Army, Coast Guard, Customs, and Border Patrol. A unified COP platform continues to be a challenge and something that we continue to strive for.
If discontinue, explain why	



Jefferson County-05	
Hazards Addressed	Flood
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	Rt. 190 Town of Pamelaia
Summary of Original Problem Summary of Solution (Project)	Construct storage building on county Rt. 190 Town of Pamelaia to allow secure storage of stockpiled assets (sandbags).
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	Complete
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	
If discontinue, explain why	Building acquired by Jefferson County, near the Rt. 190 complex, capable of stockpiling assets. Rt. 190 adjacent property and building(s) acquired.

Jefferson County-06	
Hazards Addressed	All Hazard
Lead Agency / Department	Jefferson County Buildings and Grounds
Supporting Agency / Department	-
Action Location	Waterman Drive
Summary of Original Problem Summary of Solution (Project)	Construct a building on Waterman Drive in the City of Watertown to house portable critical infrastructure equipment.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	To date, the funding for this project has not been allocated. The need to house and store CIKR for the county and emergency protective measures remains a priority for County EM.
If discontinue, explain why	



Jefferson County-07	
Hazards Addressed	Flood
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	County Ty. 26 Village of Antwerp
Summary of Original Problem Summary of Solution (Project)	Install storm drainage system County Ty. 26 Village of Antwerp.
Action Category	
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	No Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Municipality having jurisdiction has been reluctant to participate in a project at this location. Funding has also been a factor. The drainage system is pertinent at this location to alleviate drainage issues. The County will continue to engage the local authority having jurisdiction.
If discontinue, explain why	



Jefferson County-08	
Hazards Addressed	Flood
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	County Rt. 38 Town of LeRay.
Summary of Original Problem Summary of Solution (Project)	Install storm drainage system County Rt. 38 Town of LeRay.
Action Category	
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	No Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	
If discontinue, explain why	Possibly errant entry, Jefferson County does not have a County Route 38.

Jefferson County-09	
Hazards Addressed	Erosion
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	County Rt. 69 Town of Adams
Summary of Original Problem Summary of Solution (Project)	Stream bank erosion and stabilization on County Rt. 69 Town of Adams.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Municipality having jurisdiction has been reluctant to participate in a project at this location. Funding has also been a factor. The bank erosion and stabilization are pertinent at this location to alleviate drainage issues. The County will continue to work with the local municipality to facilitate work on this project.
If discontinue, explain why	



Jefferson County-10	
Hazards Addressed	Extreme Wind, Lightning, Tornado, Winter Storm, Drought, Fire
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Tree removal and trimming along various county roads through Jefferson County.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	Ongoing
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	
If discontinue, explain why	County Highway will continue to facilitate foliage mitigation. Trees do not stop growing.



Jefferson County-11	
Hazards Addressed	Coastal Erosion, Wave Action
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	County Rt. 59 Town of Brownville
Summary of Original Problem Summary of Solution (Project)	Replace deteriorated road embankment stabilization on County Rt. 59 Town of Brownville as well as address coastal erosion due to excessive wave action.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Municipality having jurisdiction has been reluctant to participate in a project at this location. Funding has also been a factor. The bank erosion and stabilization are pertinent at this location to alleviate drainage issues. The County will continue to work with the local municipality to facilitate work on this project.
If discontinue, explain why	

Jefferson County-12	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Purchase portable variable message board for deployment throughout Jefferson County.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	Complete
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	
If discontinue, explain why	County Highway has two VMS boards in service and deployable.



Jefferson County-13	
Hazards Addressed	Landslide
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	County Rt. 69 in the Town of Rodman
Summary of Original Problem Summary of Solution (Project)	Stabilization of hillside on County Rt. 69 in the Town of Rodman.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Municipality having jurisdiction has been reluctant to participate in a project at this location. Funding has also been a factor The stabilization of hillside is pertinent at this location to alleviate drainage issues.
If discontinue, explain why	

Jefferson County-14	
Hazards Addressed	Coastal Erosion
Lead Agency / Department	Jefferson County Highway Department
Supporting Agency / Department	-
Action Location	County Rt. 6 Town of Cape Vincent
Summary of Original Problem Summary of Solution (Project)	Mitigation effort for coastal erosion on County Rt. 6 Town of Cape Vincent.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	Complete
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	
If discontinue, explain why	-



Jefferson County-15	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Planning
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Expand and disseminate GIS and other hazard information on the internet.
Action Category	
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	JC Planning webpage provides flood plain information. From the 2024 Plan, the department will be able to identify information on potential hazards that can be disseminated to the public and posted on the County's website.
If discontinue, explain why	



Jefferson County-16	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Fire and Emergency Management
Supporting Agency / Department	Municipal Agencies
Action Location	-
Summary of Original Problem Summary of Solution (Project)	The County will maintain a hazard mitigation and mitigation planning web presence local municipal websites link up to this site, if they haven't already done so; all participating jurisdictions to support preparation of a joint annual hazard mitigation and mitigation planning fact sheet and its distribution; periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/tv announcements, etc. at the discretion of each jurisdiction (incorporating as much free information as possible from FEMA Publications Warehouse and other appropriate sources).
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Though the current mitigation plan is expired, there remains a link on the County website for mitigation stakeholders to interact. The gap in public outreach and municipal outreach has waned since the plan has expired. With the revitalized efforts for a current and revised FEMA approved Hazard Mitigation plan, there is a newly focused effort in providing the public and municipalities to provide feedback, concerns, and to engage in the planning process. Public outreach after adoption and continued annual stakeholder engagement will follow.
If discontinue, explain why	



Jefferson County-17	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Fire and Emergency Management
Supporting Agency / Department	Municipal Agencies
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Review existing local codes and ordinances against the identified hazards to determine whether there needs to be any amendments to address identified hazards and, where a need is identified, modify, or amend the codes or ordinances as applicable.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	No Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Similar wording shifting some of the coordination to County Code Enforcement, they are better poised to interact with local CEO's and facilitate the partnership.
If discontinue, explain why	

Jefferson County-18	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Fire and Emergency Management
Supporting Agency / Department	Municipal Agencies
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Enforcement of NYS and Local Building Codes with continual CEO training.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Code Enforcement and CEO training will continue to be necessary in perpetuity, project responsibility should include County Codes as a R/P.
If discontinue, explain why	



Jefferson County-19	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Planning
Supporting Agency / Department	Municipal Agencies
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Ensure that local comprehensive plans incorporate natural disaster mitigation techniques through a courtesy review of draft plans by the County Planning Department.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Through updated information in the 2024 Plan, the Planning Department will be able to identify hazard mitigation issues that pertain to local municipalities to include in their Comp Plans.
If discontinue, explain why	

Jefferson County-20	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Fire and Emergency Management
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Update information on the JCOFEM website regarding preparing for emergencies to incorporate profiled hazards not already discussed in these documents and ensure that the information continues to be maintained on the website.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	With the update of the hazard mitigation plan in 24/25, it is our intention to maintain the visibility on the website for the plan, an interactive storyboard for the plan, and to continue to provide mechanisms for public and municipal interaction.
If discontinue, explain why	



Jefferson County-21	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Planning
Supporting Agency / Department	Municipal Agencies, and Jefferson County Fire and Emergency Management
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Hold periodic workshops for municipalities regarding zoning and planning issues that arise regarding natural hazards and hazard mitigation.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	Ongoing
Next Steps	
Include in the 2025 HMP or Discontinue?	Discontinue
If include, revise/reword as appropriate	
If discontinue, explain why	The JC Planning Department hosts land use training for local municipalities.

Jefferson County-22	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Planning
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Ensure that the principles of this hazard mitigation plan are integrated into the new and updated development plans and strategies.
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	In future assistance to local municipalities for comprehensive plan updates the Planning Dept will include hazard mitigation data.
If discontinue, explain why	



Jefferson County-23	
Hazards Addressed	All Hazards
Lead Agency / Department	Jefferson County Planning
Supporting Agency / Department	-
Action Location	-
Summary of Original Problem Summary of Solution (Project)	Identifying problems and mitigation efforts through expanding GIS to collect and develop more sophisticated hazard mapping
Action Category	-
Current Status	Proposed - Not Started In-Progress – Project Underway Completed Discontinued – No longer relevant Discontinued – Ongoing Capability
Please describe the current status selection:	In Progress
Next Steps	
Include in the 2025 HMP or Discontinue?	Include
If include, revise/reword as appropriate	Using information developed for the 2024 Plan, Planning Dept will research and collect existing hazard mapping resources.
If discontinue, explain why	

1.8.2 Additional Mitigation Efforts

In addition to the mitigation actions completed in Table 2-1, Jefferson identified the following mitigation efforts completed since the last HMP:

1.8.3 Identified Issues

The County has identified the following vulnerabilities within their community for mitigation strategy development:

- Support with mitigation of repetitive loss properties
- County Rd 125 - coastal action is eroding the road.
- County Rd 59- coastal action/erosion
- County Rd 69- stream action/erosion
- Snowplow shed- Cannot start snowplow due to extreme temperatures (cold – can see temperatures via NWS); need to store the vehicle inside in order to use snowplow.
- New EOC
- Retrofit construction Public Safety Building (including the Jail) and County Office Building, County Admin up to current earthquake codes
- Self-propelling snowblower
- Retrofit: structural integrity for snowload - retrofit (Highway dept plow barn/garage) roofs are flat. or municipal fire stations



- Watertown International Airport in Jefferson County, NY faces significant operational risks during periods of extreme cold due to recurring failures in the heating systems of two to three remote buildings. These failures often go undetected until substantial damage has occurred, including burst pipes and compromised plumbing infrastructure. The absence of centralized thermostat monitoring and temperature alarms means that staff are unaware when heating systems go offline, leaving critical assets exposed to freezing conditions. This vulnerability poses serious financial and operational consequences. Aircraft housed in hangars are at risk, particularly their onboard water systems, which can freeze and require repairs costing tens of thousands of dollars. In such cases, the county may be held liable for damages to customer-owned aircraft. Beyond financial implications, the airport supports sensitive operations that demand strict temperature control. These include medivac aircraft transporting vital organs and medicines, as well as scientific equipment used in research missions. A failure to maintain appropriate environmental conditions could jeopardize these missions and compromise public health and safety. To mitigate these risks, the implementation of a centralized monitoring system with low/high temperature alarms is critical. Such a system would enable real-time alerts and proactive maintenance, ensuring the protection of valuable assets and the continuity of essential services.
- Watertown International Airport faces a growing threat from wildfires, particularly due to the presence of wooded areas and abandoned runways surrounding the facility. These zones can act as fuel sources, potentially compromising the airport's security perimeter and defense lines during dry conditions or lightning strikes. To proactively address this risk, the airport is exploring advanced surveillance and detection strategies. One proposed solution involves installing infrared (IR) cameras atop the tallest buildings to continuously scan the surrounding landscape for thermal anomalies or hotspots that may indicate early-stage fires. This would allow for rapid identification and response before a fire can spread. Additionally, integrating electronic surveillance systems with automated notification capabilities would enhance situational awareness. These systems could detect ignition sources such as lightning strikes and immediately alert maintenance crews and emergency responders, enabling swift action to contain any fire outbreak. Protecting airport infrastructure, personnel, and critical operations from wildfire hazards is essential. By investing in modern monitoring technologies and establishing a responsive fire mitigation protocol, Watertown International Airport can significantly reduce its vulnerability and ensure operational continuity.
- Watertown International Airport is taking proactive steps to improve runway safety and winter operations through the implementation of a runway condition monitoring system. This system is designed to continuously track key environmental variables such as pavement surface temperature and ambient air temperature. By analyzing real-time data and detecting temperature fluctuations, the system can accurately predict when runway surfaces are likely to ice over. This predictive capability is critical for timely and precise application of de-icing chemicals. Knowing exactly when and how much chemical to apply helps prevent both under-treatment, which can lead to hazardous conditions, and over-treatment, which wastes resources and may cause environmental concerns. Proper timing and dosage also reduce wear on airport infrastructure and minimize operational disruptions. By integrating this technology, Watertown International Airport can significantly enhance runway safety, optimize maintenance efforts, and ensure compliance with best practices in cold-weather operations.
- Watertown International Airport maintains a 7-mile gravel perimeter access road that plays a vital role in security, maintenance, and emergency response operations. However, several sections of this road are prone to flooding caused by flash storms, snowmelt, and heavy rainfall. These conditions frequently render portions of the road impassable, compromising access and delaying critical airport functions. To address these challenges, a comprehensive upgrade is proposed that includes paving the entire perimeter road and upsizing culverts to improve drainage capacity. Paving will enhance year-round accessibility, reduce erosion, and minimize maintenance costs, while larger culverts will help manage stormwater more effectively and prevent future washouts. These improvements will strengthen the airport's infrastructure, ensure reliable access for personnel and equipment, and support long-term operational resilience in the face of increasingly unpredictable weather patterns.



1.8.4 Proposed Hazard Mitigation Actions for the HMP Update

The County 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-Jefferson-01. Flood Prone Roadways

Lead Agency:	Jefferson County Highway Department
Supporting Agencies:	NYS Department of Transportation (NYSDOT), Jefferson County Fire & Emergency Management, NYS Department of Environmental Conservation (DEC), FEMA Region II
Hazards of Concern:	Flood, Severe Storm, Severe Winter Storm
Description of the Problem:	County Road 69 is a heavily traveled route connecting Watertown to Adams, used by agricultural vehicles, delivery trucks, and emergency services. The road runs adjacent to Sandy Creek and is subject to recurring erosion and washouts, leading to closures and a 30-mile detour. Approximately one mile of road shoulder is affected.
Description of the Solution:	Install a concrete retaining wall along the banks of Sandy Creek to stabilize the road shoulder and prevent further erosion. Project scoping and engineering design are required before construction (Phase II). This action will reduce risk to NFIP-insured properties and maintain critical transportation access.
Estimated Cost:	\$2-3 million
Potential Funding Sources:	FEMA HMGP, FEMA FMA, NYS DOT Bridge NY Program, local highway capital improvement funds
Implementation Timeline:	2–4 years (scoping, design, permitting, construction)
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Prevents road closures and detours Protects public safety and emergency response routes Reduces long-term maintenance and repair costs Preserves economic activity and agricultural transport
Impact on Socially Vulnerable Populations:	Ensures continued access to services and employment for rural and underserved populations
Impact on Future Development:	Supports safe development and infrastructure investment in adjacent areas
Impact on Critical Facilities/Lifelines:	Maintains access for emergency services, schools, and commerce; protects a key transportation corridor
Impact on Capabilities:	Enhances local engineering, planning, and emergency response coordination
Climate Change Considerations:	Addresses increased frequency of extreme precipitation and streambank erosion due to climate change
Mitigation Category	Structure and Infrastructure Projects
CRS Category	Flood Protection (530); Drainage System Maintenance (540)
Priority	High



Alternative	Action	Evaluation
	No action	-
	Use native vegetation, live staking, and erosion control blankets to stabilize the streambank and road shoulder.	Less durable in extreme weather or high-flow events Longer establishment time for vegetation to take hold May require ongoing maintenance and replanting
	Shift the affected portion of County Road 69 further inland to reduce exposure to erosion and flooding.	High upfront cost due to land acquisition and construction Potential environmental impact from new roadbed Longer timeline and more complex permitting

Action 2025-Jefferson-02. County Road 125

Lead Agency:	Jefferson County Highway Department
Supporting Agencies:	NYS Department of Transportation (NYSDOT), NYS Department of Environmental Conservation (DEC), Jefferson County Fire & Emergency Management, FEMA Region II
Hazards of Concern:	Flood, Severe Storm, Severe Winter Storm
Description of the Problem:	County Road 125 is a heavily traveled shoreline loop road, especially during the summer tourist season. Portions of the road have been closed intermittently due to erosion and storm damage, with closures occurring approximately once every five years. Due to the loop configuration, closure of any segment cuts off access to the entire road. The road is also used for emergency response, including water and ice rescues. Coastal erosion from Lake Ontario is the primary hazard.
Description of the Solution:	Conduct a comprehensive feasibility and engineering study to assess shoreline stabilization options, identify vulnerable segments, and develop a phased mitigation and construction plan. The study will evaluate nature-based and structural solutions to reduce erosion and maintain road access.
Estimated Cost:	\$10 million (for study and phased implementation)
Potential Funding Sources:	FEMA HMGP, FEMA FMA, NYS Resiliency and Economic Development Initiative (REDI), local transportation improvement funds
Implementation Timeline:	1–2 years for study; 3–7 years for phased implementation
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Maintains access for emergency services and tourism Reduces long-term maintenance and repair costs Supports local economic activity Informs future capital planning and investment
Impact on Socially Vulnerable Populations:	Ensures continued access to services and emergency response for residents in isolated shoreline communities
Impact on Future Development:	Supports safe development and infrastructure investment in shoreline areas
Impact on Critical Facilities/Lifelines:	Maintains access for emergency response, utilities, and seasonal population centers
Impact on Capabilities:	Enhances planning, engineering, and emergency response coordination
Climate Change Considerations:	Addresses increased shoreline erosion, storm surge, and ice damage due to climate change and lake level variability
Mitigation Category	Planning and Analysis; Structure and Infrastructure Projects
CRS Category	Flood Protection (530); Coastal Erosion Management (420)
Priority	High



Alternative	Action	Evaluation
	No action	-
	Install Temporary Shoreline Armoring (e.g., Riprap or Gabions)	Not a long-term solution; may degrade over time May not withstand severe storms or high lake levels
	Develop a contingency plan for seasonal closures, including signage, alternate emergency access routes, and pre-positioned rescue equipment.	Does not prevent erosion or protect infrastructure May inconvenience residents and tourists

Action 2025-Jefferson-03. County Road 59

Lead Agency:	Jefferson County Highway Department
Supporting Agencies:	NYS Department of Transportation (NYSDOT), NYS Department of Environmental Conservation (DEC), Jefferson County Fire & Emergency Management, FEMA Region II
Hazards of Concern:	Flood, Severe Storm, Severe Winter Storm
Description of the Problem:	County Road 59 is a heavily traveled shoreline loop road, especially during the summer tourist season. Portions of the road have been closed intermittently due to erosion and storm damage, with closures occurring approximately once every five years. Due to the loop configuration, closure of any segment cuts off access to the entire road. The road is also used for emergency response, including water and ice rescues. A 6-mile stretch is vulnerable to erosion from Lake Ontario.
Description of the Solution:	Conduct a comprehensive shoreline vulnerability and engineering study to assess erosion risks, identify priority segments, and develop a phased mitigation plan. The study will evaluate both structural and nature-based solutions to improve long-term resilience and maintain access.
Estimated Cost:	\$20 million (for study and phased implementation)
Potential Funding Sources:	FEMA HMGP, FEMA FMA, NYS REDI (Resiliency and Economic Development Initiative), NYS DOT, local transportation improvement funds
Implementation Timeline:	1–2 years for study; 3–10 years for phased implementation
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Maintains access for emergency services and seasonal residents Reduces long-term maintenance and repair costs Supports local economic activity and tourism Informs future capital planning and investment
Impact on Socially Vulnerable Populations:	Ensures continued access to services and emergency response for shoreline communities, including vulnerable populations
Impact on Future Development:	Supports safe and resilient development in shoreline areas
Impact on Critical Facilities/Lifelines:	Maintains access for emergency response, utilities, and seasonal population centers
Impact on Capabilities:	Enhances planning, engineering, and emergency response coordination
Climate Change Considerations:	Addresses increased shoreline erosion, storm surge, and ice damage due to climate change and lake level variability
Mitigation Category	Planning and Regulatory; Structure and Infrastructure Projects
CRS Category	Flood Protection (530); Coastal Erosion Management (420)
Priority	High



Alternative	Action	Evaluation
	No action	-
	Install rock revetments or other hard armoring structures along the most erosion-prone segments of the 6-mile stretch.	High cost per mile and may not be feasible for full 6-mile stretch May alter natural shoreline processes and habitats
	Identify and relocate vulnerable road segments inland where feasible, allowing natural shoreline processes to continue.	High upfront cost for land acquisition and road realignment Complex planning and permitting Potential community resistance due to changes in access or land use

Action 2025-Jefferson-04. County Culverts

Lead Agency:	Jefferson County Highway Department
Supporting Agencies:	NYS Department of Transportation (NYSDOT), NYS Department of Environmental Conservation (DEC), Jefferson County Fire & Emergency Management, FEMA Region II
Hazards of Concern:	Flooding, Severe Storms, Severe Winter Storms
Description of the Problem:	Jefferson County owns 268 culverts, many of which are impacted by erosion, scour, and debris accumulation. Several roads—including County Roads 87, 189, 95, and 97—experience washouts due to undersized culverts, resulting in road closures. County Roads 155, 156, and 75 each have two undersized culverts that contribute to flooding and washouts. County Road 69 has five undersized culverts that cause flood damage to adjacent private properties.
Description of the Solution:	Conduct a countywide culvert assessment and prioritization study to identify high-risk culverts. Implement a phased replacement and upsizing program for undersized and deteriorated culverts, beginning with those affecting critical roads and properties. Incorporate natural channel design and debris management strategies where feasible.
Estimated Cost:	\$15–25 million (depending on number and size of culverts replaced)
Potential Funding Sources:	FEMA BRIC, FEMA HMGP, NYS Bridge NY Program, Clean Water State Revolving Fund (CWSRF), local highway capital improvement funds
Implementation Timeline:	3–10 years (assessment, design, permitting, phased construction)
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Prevents road closures and detours Reduces flood damage to public and private property Improves emergency access and response times Enhances long-term infrastructure resilience
Impact on Socially Vulnerable Populations:	Ensures continued access to services and emergency response for rural and underserved communities
Impact on Future Development:	Supports resilient infrastructure planning and reduces development constraints in flood-prone areas
Impact on Critical Facilities/Lifelines:	Maintains access to schools, healthcare facilities, and emergency services
Impact on Capabilities:	Enhances local engineering, asset management, and emergency response coordination
Climate Change Considerations:	Addresses increased precipitation intensity and frequency, improving infrastructure adaptability to future climate conditions
Mitigation Category	Structure and Infrastructure Projects
CRS Category	Drainage System Maintenance (540); Flood Protection (530)
Priority	High



Alternative	Action	Evaluation
	No action	-
	Install Debris screens and perform routine maintenance	Does not address undersized culverts or structural deficiencies Requires ongoing labor and maintenance Limited effectiveness during extreme storm events
	Prioritize and replace only the most critical culverts (e.g., those on emergency routes or near vulnerable properties) without conducting a full countywide assessment.	May overlook hidden risks in less obvious locations Lacks comprehensive data for long-term planning Could lead to inefficient sequencing of future upgrades

Action 2025-Jefferson-05. Structural Retrofit Program for Agricultural Buildings

Lead Agency:	Jefferson County Soil and Water Conservation District
Supporting Agencies:	NYS Department of Agriculture and Markets, USDA Natural Resources Conservation Service (NRCS), Jefferson County Emergency Management, Cornell Cooperative Extension
Hazards of Concern:	Severe Winter Storms
Description of the Problem:	Jefferson County frequently experiences heavy snow events that have led to barn roof collapses, trapping livestock and damaging essential farm equipment such as tractors and balers. Many small and medium-sized farms lack sufficient insurance coverage to recover from these losses, resulting in significant economic and operational hardship.
Description of the Solution:	Implement a Structural Retrofit Program for Agricultural Buildings. This program will provide technical guidance and financial assistance to help farmers retrofit or reinforce barn roofs to withstand heavy snow loads. Priority will be given to small and medium-sized farms with limited insurance coverage.
Estimated Cost:	\$5–10 million (depending on number of participating farms and retrofit complexity)
Potential Funding Sources:	FEMA HMGP, USDA NRCS EQIP (Environmental Quality Incentives Program), NYS Ag & Markets Resilient Farms Fund, local agricultural development grants
Implementation Timeline:	2–5 years (program development, outreach, engineering assessments, phased retrofits)
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Prevents livestock loss and equipment damage Reduces financial burden on farmers Supports continuity of agricultural operations Enhances structural safety and resilience
Impact on Socially Vulnerable Populations:	Supports small-scale and family-owned farms that may lack resources for self-funded mitigation
Impact on Future Development:	Encourages resilient agricultural infrastructure and supports long-term viability of rural land use
Impact on Critical Facilities/Lifelines:	Protects food supply chain infrastructure and supports local emergency response capacity
Impact on Capabilities:	Enhances local agricultural planning, engineering, and emergency preparedness capabilities
Climate Change Considerations:	Addresses increased frequency of extreme winter weather and snow load variability due to climate change
Mitigation Category	Structure and Infrastructure Projects; Planning and Regulatory



CRS Category	Public Information (330); Flood Protection (530) – applicable if tied to multi-hazard resilience	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Install snow load sensors and weather monitoring systems on barns and agricultural buildings to alert farmers when snow accumulation reaches dangerous levels.	Does not physically strengthen structures Relies on timely response from farmers to remove snow May not be effective during rapid accumulation or blizzards
	Establish a county-supported program to provide or subsidize snow removal services for agricultural buildings during extreme winter events.	Recurring operational cost for the county Logistical challenges during widespread storms Does not address long-term structural vulnerability

Action 2025-Jefferson-06. Wind-Resilient Design Program

Lead Agency:	Jefferson County Soil and Water Conservation District
Supporting Agencies:	USDA Rural Development, NYSEERDA, NYS Department of Agriculture and Markets, Cornell Cooperative Extension, Jefferson County Emergency Management
Hazards of Concern:	Severe Storm, Severe Winter Storm
Description of the Problem:	Jefferson County has experienced significant wind-related damage to both public and private agricultural infrastructure. High winds have leveled barns, toppled or buckled grain silos, and destroyed unharvested crops such as grains, oats, and barley. These losses have major economic impacts, particularly for small and mid-sized farms.
Description of the Solution:	Launch a Wind-Resilient Design Incentive Program to promote wind-resistant construction standards for barns and silos. Offer cost-sharing or grant assistance for anchoring systems, structural retrofits, and windbreak installations such as tree lines or fencing. Provide technical guidance and outreach to farmers on best practices.
Estimated Cost:	\$5–8 million (depending on participation and scale of retrofits)
Potential Funding Sources:	USDA Rural Development, NYSEERDA Agricultural Energy Programs, FEMA HMGP, NYS Ag & Markets Resilient Farms Fund, local agricultural development grants
Implementation Timeline:	2–5 years (program development, outreach, phased implementation)
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Reduces structural and crop losses Supports continuity of agricultural operations Encourages proactive mitigation and planning Enhances farm safety and sustainability
Impact on Socially Vulnerable Populations:	Supports small and family-owned farms with limited financial capacity to self-fund mitigation
Impact on Future Development:	Encourages resilient agricultural infrastructure and supports long-term viability of rural land use
Impact on Critical Facilities/Lifelines:	Protects food production and storage infrastructure, supporting local and regional food systems
Impact on Capabilities:	Enhances agricultural planning, engineering, and emergency preparedness capabilities
Climate Change Considerations:	Addresses increased frequency and intensity of wind events due to climate change; supports adaptive agricultural practices



Mitigation Category	Structure and Infrastructure Projects; Education and Awareness Programs	
CRS Category	Public Information (330); Agricultural Risk Reduction (custom local category if applicable)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Focus on planting tree lines or installing windbreak fencing around vulnerable agricultural structures and fields to reduce wind speed and damage.	Takes time to establish (especially for tree lines) Less effective for extreme wind events Does not strengthen existing structures
	Create a local or state-supported emergency fund to help small and mid-sized farms recover quickly from wind-related damage.	Requires sustained funding and administrative oversight Does not reduce future risk or improve infrastructure resilience

Action 2025-Jefferson-07. On-Farm Backup Power Program

Lead Agency:	Jefferson County Soil and Water Conservation District
Supporting Agencies:	USDA Rural Development, NYSEERDA, NYS Department of Agriculture and Markets, Jefferson County Emergency Management, Cornell Cooperative Extension
Hazards of Concern:	Severe Storms, Severe Winter Storms
Description of the Problem:	Power outages in Jefferson County have resulted in the loss of livestock due to the inability to operate milking and refrigeration equipment. Nearly 3,000 cows are at risk during outages, as failure to milk them can lead to infections and death. These outages pose a serious threat to animal welfare and farm viability.
Description of the Solution:	Establish an On-Farm Backup Power Program to provide grants or low-interest loans for solar + battery storage systems or generators capable of powering essential farm operations. The program will prioritize farms with large livestock populations and limited access to backup power.
Estimated Cost:	\$5–10 million (depending on number of farms and system types)
Potential Funding Sources:	FEMA HMGP, USDA Rural Energy for America Program (REAP), NYSEERDA Clean Energy for Agriculture, local agricultural development funds
Implementation Timeline:	2–5 years (program development, outreach, phased implementation)
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Prevents livestock loss and associated economic impacts Reduces stress on emergency services during outages Supports energy independence and sustainability Enhances farm resilience to extreme weather events
Impact on Socially Vulnerable Populations:	Supports small and mid-sized farms that may lack resources to invest in backup systems independently
Impact on Future Development:	Encourages resilient agricultural infrastructure and supports long-term viability of rural land use
Impact on Critical Facilities/Lifelines:	Protects food production and storage infrastructure, supporting local and regional food systems
Impact on Capabilities:	Enhances agricultural energy planning, emergency preparedness, and coordination with utility providers
Climate Change Considerations:	Addresses increased frequency of extreme weather and grid disruptions due to climate change; supports renewable energy integration



Mitigation Category	Structure and Infrastructure Projects; Energy Resilience	
CRS Category	Public Information (330); Agricultural Risk Reduction (custom local category if applicable)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Install permeable pavement in key areas	Higher upfront cost than traditional pavement Requires regular maintenance to prevent clogging Limited effectiveness in areas with clay soils or high water tables
	Create or expand green infrastructure (e.g., rain gardens, bioswales)	Requires space and careful site selection Needs ongoing maintenance (weeding, sediment removal) Limited capacity during extreme rainfall events

Action 2025-Jefferson-08. Crop Diversification and Protection Program

Lead Agency:	Jefferson County Soil and Water Conservation District
Supporting Agencies:	USDA Risk Management Agency, NYS Department of Agriculture and Markets, Cornell Cooperative Extension, Jefferson County Agricultural Development Council
Hazards of Concern:	Extreme Temperatures, Drought, Severe Weather, Severe Winter Weather
Description of the Problem:	Jefferson County farmers face increasing crop losses due to high winds and increasing heat and drought conditions. These hazards damage or destroy crops before harvest, leading to significant economic losses and threatening the viability of small and mid-sized farms.
Description of the Solution:	Launch a Crop Diversification and Protection Program to promote the use of wind-tolerant crop varieties, row covers, and other protective measures. Provide education on crop insurance options and encourage diversification of crops to reduce economic risk and improve resilience.
Estimated Cost:	\$2–5 million (depending on outreach, technical assistance, and adoption rates)
Potential Funding Sources:	USDA Risk Management Agency, NYS Grown & Certified Program, FEMA HMGP (for education and outreach), local agricultural development funds
Implementation Timeline:	1–3 years (program development, outreach, technical assistance)
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	Reduces financial risk for farmers Encourages sustainable and diversified agriculture Improves awareness and uptake of crop insurance Enhances food security and local supply chains
Impact on Socially Vulnerable Populations:	Supports small and historically underserved farms with limited financial flexibility
Impact on Future Development:	Encourages resilient agricultural practices and supports long-term land use planning
Impact on Critical Facilities/Lifelines:	Indirectly supports food systems and agricultural supply chains
Impact on Capabilities:	Enhances agricultural extension services, risk management education, and local planning capacity
Climate Change Considerations:	Addresses increased frequency of drought and wind events; promotes adaptive farming practices



Mitigation Category	Education and Awareness Programs; Natural Systems Protection	
CRS Category	Public Information (330); Agricultural Risk Reduction (custom local category if applicable)	
Priority	Medium to High	
Alternative	Action	Evaluation
	No action	-
	Expand access to on-farm water storage and irrigation systems	Upfront installation costs can be high Requires maintenance and training Less effective for wind or heat-related crop damage
	Establish a localized weather station network and alert system to provide real-time data and forecasts tailored to farm operations.	Does not directly prevent crop loss Requires farmer engagement and tech adoption Limited impact without complementary mitigation actions

Action 2025-Jefferson-09. Watershed-Based Nutrient Reduction Program

Lead Agency	Jefferson County Soil and Water Conservation District
Supporting Agencies	NYS Department of Environmental Conservation (DEC), USDA Natural Resources Conservation Service (NRCS), Jefferson County Public Health Service, local municipalities, Cornell Cooperative Extension
Hazards of Concern	Flood, Extreme Heat
Description of the Problem	Harmful algal blooms have increasingly impacted Jefferson County's lakes and shorelines, leading to beach closures at popular recreational sites such as Westcott and Southwick beaches during the summer. These closures affect tourism, fishing tournaments (e.g., BassMasters), and ice fishing events, resulting in economic losses for local businesses and communities.
Description of the Solution	Implement a Watershed-Based Nutrient Reduction Program to reduce phosphorus and nitrogen runoff from agricultural and urban areas. This includes best management practices (BMPs) such as vegetative buffer strips, cover crops, stormwater retrofits, and improved fertilizer management. The program supports long-term water quality improvements and ecosystem-based mitigation.
Estimated Cost	\$5–10 million (depending on watershed size and BMP adoption rates)
Potential Funding Sources	NYSDEC Water Quality Improvement Project (WQIP), USDA NRCS EQIP, Great Lakes Restoration Initiative (GLRI), FEMA BRIC (for nature-based solutions), local stormwater utility funds
Implementation Timeline	3–7 years (planning, outreach, phased implementation)
Goals Met	1, 2, 3, 4, 5, 6, 7
Benefits	Reduces frequency and severity of HABs; Protects recreational and economic assets; Enhances aquatic habitat and biodiversity; Supports sustainable land and water management
Impact on Socially Vulnerable Populations	Preserves access to public recreational resources and supports local economies that benefit low-income residents
Impact on Future Development	Encourages sustainable land use and stormwater management practices in growing areas
Impact on Critical Facilities/Lifelines	Protects drinking water sources and recreational infrastructure



Impact on Capabilities	Enhances watershed planning, interagency coordination, and public education on water quality	
Climate Change Considerations	Addresses increased nutrient loading and warmer water temperatures that exacerbate HABs; supports climate-adaptive water management	
Mitigation Category	Natural Systems Protection; Local Plans and Regulations	
CRS Category	Water Quality Protection (430); Public Information (330)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Launch a countywide education initiative to inform residents, farmers, and businesses about nutrient pollution, proper fertilizer use, and septic system maintenance.	Relies on voluntary compliance Impact is difficult to measure Less effective without accompanying physical interventions
	Targeted septic system upgrade incentive program	Moderate to high cost per household Requires inspection and enforcement capacity Limited to areas with existing septic systems

Action 2025-Jefferson-10. Wind Monitoring and Closure Protocol System

Lead Agency	Thousand Islands Bridge Authority
Supporting Agencies	USDOT, NYS Police, New York State Department of Transportation (NYS DOT), Jefferson County Department of Planning
Hazards of Concern	Severe Storm, Severe Winter Storm
Description of the Problem	The Thousand Islands Bridge frequently experiences high wind events that result in lane closures or full shutdowns. These conditions have led to numerous vehicle accidents and pose a significant risk to public safety and transportation continuity.
Description of the Solution	Install a Wind Monitoring and Closure Protocol System, including real-time wind sensors and automated signage. This system will alert drivers and enforce lane closures or detours during high wind events, reducing accident risk and improving safety.
Estimated Cost	\$3–5 million
Potential Funding Sources	NYS DOT, USDOT INFRA Grants, FEMA BRIC (for transportation resilience)
Implementation Timeline	2–4 years (planning, procurement, installation, and testing)
Goals Met	1, 2, 3, 4, 5, 6, 7
Benefits	Improved driver awareness and safety, reduced accident frequency, minimized unplanned closures, and enhanced coordination between transportation and emergency management agencies.
Impact on Socially Vulnerable Populations	Ensures safe and reliable transportation access for all populations, including those with limited mobility or access to alternate routes.
Impact on Future Development	Supports resilient infrastructure planning and ensures continued access to regional economic and tourism assets.



Impact on Critical Facilities/Lifelines	Maintains access to cross-border transportation routes, emergency services, and commercial supply chains.	
Impact on Capabilities	Enhances real-time monitoring, emergency response coordination, and transportation system management.	
Climate Change Considerations	Addresses increased frequency and intensity of wind events due to climate change; supports adaptive transportation infrastructure.	
Mitigation Category	Structure and Infrastructure Projects; Local Plans and Regulations	
CRS Category	Public Information (330); Transportation Protection (custom local category if applicable)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Install structural wind barriers or wind fencing	High installation cost and potential structural challenges Limited effectiveness in extreme wind events May obstruct views
	Implement a policy restricting high-profile or lightweight vehicles during forecasted high wind events, enforced manually by bridge staff or law enforcement	Relies on accurate forecasting and timely communication Manual enforcement may be inconsistent or delayed Does not provide real-time data or automated alerts

Action 2025-Jefferson-11. Ice Jam Early Warning and Response System

Lead Agency	Jefferson County Emergency Management
Supporting Agencies	NYS Department of Transportation (NYSDOT), US Army Corps of Engineers (USACE), National Weather Service (NWS), Jefferson County Highway Department
Hazards of Concern	Flood, Severe Winter Storms
Description of the Problem	Interstate 81 in the Town of Ellisburg has experienced ice jams that have forced the closure of the southbound lanes for 4–5 days. These closures disrupt regional transportation, emergency response, and commerce, and pose safety risks to motorists.
Description of the Solution	Deploy a real-time Ice Jam Early Warning and Response System. This includes installation of river monitoring sensors and cameras to detect ice buildup, and development of a coordinated response plan with NYSDOT and emergency services. The system will improve early warning capabilities and reduce the duration and impact of closures.
Estimated Cost	\$2–4 million
Potential Funding Sources	FEMA HMGP, USACE Ice Jam Mitigation Program, NYS DOT, BRIC
Implementation Timeline	2–4 years (planning, equipment installation, interagency coordination)
Goals Met	1, 2, 3, 4, 5, 6, 7
Benefits	Reduces duration and frequency of highway closures, improves safety for motorists, supports continuity of emergency and commercial transportation, and enhances interagency coordination and preparedness.



Impact on Socially Vulnerable Populations	Ensures continued access to services and emergency response for rural and underserved communities affected by highway closures.	
Impact on Future Development	Supports resilient infrastructure planning and reduces risk to future transportation investments.	
Impact on Critical Facilities/Lifelines	Maintains access to regional transportation corridors, emergency services, and supply chains.	
Impact on Capabilities	Improves local monitoring, emergency response coordination, and hazard mitigation planning capabilities.	
Climate Change Considerations	Addresses increased variability in freeze-thaw cycles and extreme winter weather due to climate change.	
Mitigation Category	Structure and Infrastructure Projects; Local Plans and Regulations	
CRS Category	Flood Protection (530); Public Information (330)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Install physical structures upstream to prevent ice accumulation near vulnerable bridge or culvert areas.	High installation and maintenance costs Requires detailed hydrologic analysis May impact aquatic ecosystems and navigation
	Develop and distribute seasonal preparedness materials, conduct drills, and coordinate with local agencies and the public on detour routes and safety protocols.	Does not prevent ice jams Relies on accurate forecasting and public compliance Limited impact on reducing closure duration

Action 2025-Jefferson-12. Ice Jam Reduction Feasibility Study

Lead Agency	Jefferson County Highway Department
Supporting Agencies	NYS Department of Transportation (NYSDOT), U.S. Army Corps of Engineers (USACE), NYS Environmental Facilities Corporation (EFC), Jefferson County Emergency Management
Hazards of Concern	Flooding, Extreme Temperatures
Description of the Problem	State Route 3 in the Town of Ellisburg experiences chronic ice jam issues at the South Sandy Creek Bridge. These events occur annually and render the bridge and Route 3 impassable, sometimes for weeks. Impacts of extreme temperatures are also an issue with increased freeze-thaw cycles. A year-round detour has been established due to the frequency of these disruptions.
Description of the Solution	Conduct a feasibility study to evaluate options for elevating the bridge or modifying the creek channel to reduce ice jam formation. The study will assess engineering, environmental, and cost considerations to support long-term infrastructure resilience and risk reduction.
Estimated Cost	\$1–3 million (for feasibility study and preliminary design)
Potential Funding Sources	FEMA HMGP, USACE Ice Jam Mitigation Program, NYS EFC, NYS DOT
Implementation Timeline	1–2 years for study; additional time for design and construction if pursued
Goals Met	1, 2, 3, 4, 5, 6, 7



Benefits	Improves safety and reliability of State Route 3, reduces long-term maintenance and detour costs, supports emergency response and regional connectivity	
Impact on Socially Vulnerable Populations	Ensures continued access to services and emergency routes for rural and isolated communities	
Impact on Future Development	Supports resilient infrastructure planning and reduces development constraints	
Impact on Critical Facilities/Lifelines	Maintains access to emergency services, schools, and regional transportation networks	
Impact on Capabilities	Enhances local planning, engineering, and emergency response coordination	
Climate Change Considerations	Addresses increased freeze-thaw variability and ice jam frequency due to climate change	
Mitigation Category	Planning and Analysis; Structure and Infrastructure Projects	
CRS Category	Flood Protection (530); Drainage System Maintenance (540)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Seasonal ice monitoring and manual ice breaking	Labor- and equipment-intensive Requires precise timing and coordination Does not address underlying structural vulnerability
	Build small upstream structures (e.g., ice control weirs or deflectors) to slow ice movement and reduce accumulation near the bridge.	Moderate to high cost depending on design Requires environmental permitting May shift risk to other parts of the creek

Action 2025-Jefferson-13. Bridge Scour Protection and Debris Deflection Program

Lead Agency	Jefferson County Highway Department
Supporting Agencies	NYS Department of Transportation (NYSDOT), NYS Department of Environmental Conservation (DEC), Jefferson County Fire & Emergency Management, FEMA Region II
Hazards of Concern	Flood, Severe Storm
Description of the Problem	Jefferson County owns 140 bridges, many of which are affected by erosion, scour, and debris accumulation. These issues have become more prevalent than flood inundation. Debris from upstream flows has damaged bridge structures, posing risks to transportation safety and continuity.
Description of the Solution	Implement a Bridge Scour Protection and Debris Deflection Program. Retrofit vulnerable bridges with riprap, scour countermeasures, and upstream debris deflectors. Prioritize bridges based on risk, structural condition, and traffic volume.
Estimated Cost	\$10–20 million (depending on number and scale of retrofits)
Potential Funding Sources	FEMA HMGP, FHWA Emergency Relief Program, NYS Bridge NY, local capital improvement funds
Implementation Timeline	3–8 years (assessment, design, permitting, phased construction)



Goals Met	1, 2, 3, 4, 5, 6, 7	
Benefits	Reduces bridge damage and maintenance costs; improves safety and reliability of transportation routes; supports long-term infrastructure resilience and emergency access.	
Impact on Socially Vulnerable Populations	Ensures continued access to services and emergency response for rural and underserved communities.	
Impact on Future Development	Supports resilient infrastructure planning and reduces development constraints in erosion-prone areas.	
Impact on Critical Facilities/Lifelines	Maintains access to schools, healthcare facilities, emergency services, and supply chains.	
Impact on Capabilities	Enhances local engineering, asset management, and emergency response coordination.	
Climate Change Considerations	Addresses increased frequency of high-intensity storms and streamflow variability due to climate change.	
Mitigation Category	Structure and Infrastructure Projects	
CRS Category	Drainage System Maintenance (540); Flood Protection (530)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Enhanced bridge inspection and maintenance program guide targeted maintenance and emergency repairs.	Does not reduce underlying risk from severe erosion or debris May lead to higher long-term costs if issues are not addressed proactively
	Implement upstream land and water management practices (e.g., reforestation, sediment traps, debris catchment systems) to reduce the volume of debris and sediment reaching bridges.	Requires coordination across jurisdictions and landowners Longer timeline to see measurable results May not fully eliminate the need for structural bridge protection

Action 2025-Jefferson-14. Coastal Erosion Mitigation Program

Lead Agency:	Jefferson County Fire & Emergency Management
Supporting Agencies:	NYS Office of Parks, Recreation and Historic Preservation (OPRHP), NYS Department of Environmental Conservation (DEC), U.S. Army Corps of Engineers (USACE), NOAA Office for Coastal Management Local municipalities and park authorities, Jefferson County Planning Department
Hazards of Concern:	Flood, Severe Storm, Severe Winter Storm
Description of the Problem:	Numerous State Parks experience coastal erosion, including: Keywaden, Long Point, Grassy Point, Wellesey, Kring Point, Wescott (some sand dredging has occurred at the State Launch), Cedar Point, Southwicks (have brought in sandbags before), and Burnham.



Description of the Solution:	<p>Develop and implement comprehensive Coastal Erosion Mitigation Program including: Living shorelines, dune restoration, and native vegetation planting at impacted parks (e.g., Southwick, Wescott, Kring Point) to reduce erosion and absorb wave energy. Expand sand replenishment efforts (e.g., at Wescott and Southwick) and develop a long-term sediment management plan for high-use beaches. Coastal Erosion Monitoring and Early Warning System: Install erosion monitoring stations and develop a GIS-based system to track shoreline changes and inform maintenance needs.</p>	
Estimated Cost:	\$2.5 million – \$4 million (depending on scope and monitoring system complexity)	
Potential Funding Sources:	FEMA HMGP, NYSDEC Resilient NY, NYS Environmental Bond Act USACE CAP Section 103, NOAA Coastal Resilience Grants, NYS GIS Cooperative	
Implementation Timeline:	3–5 years (phased implementation with pilot projects in Year 1–2)	
Goals Met:	1, 2, 3, 4, 5, 6, 7	
Benefits:	<p>Reduced erosion and storm damage Enhanced public safety and infrastructure protection Improved habitat and biodiversity Increased recreational value and tourism revenue Data-driven shoreline management</p>	
Impact on Socially Vulnerable Populations:	Improves access to safe recreational areas and protects community assets that serve all residents, including low-income and underserved populations.	
Impact on Future Development:	Supports sustainable land use planning and reduces risk to future development in coastal areas.	
Impact on Critical Facilities/Lifelines:	Protects park infrastructure, access roads, and utilities that serve as community lifelines during emergencies.	
Impact on Capabilities:	Builds local capacity for coastal monitoring, planning, and adaptive management.	
Climate Change Considerations:	Addresses sea level rise and increased storm intensity through nature-based, adaptive solutions.	
Mitigation Category	Natural Systems Protection	
CRS Category	Open Space Preservation (420), Flood Protection (530), Drainage System Maintenance (540)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Expand living shoreline and dune restoration projects without monitoring system	<p>Lacks real-time data to guide maintenance or future planning May be less adaptive to changing shoreline conditions Effectiveness varies by site and storm intensity</p>
	Use drones to conduct periodic aerial surveys of shoreline conditions and erosion patterns, providing visual data for planning and maintenance.	<p>Requires trained personnel and data analysis May miss rapid erosion events between surveys</p>



Action 2025-Jefferson-15. Fairground Flood Mitigation Program

Lead Agency:	Jefferson County Planning Department
Supporting Agencies:	Jefferson County Fire & Emergency Management, Jefferson County Fairgrounds Administration, NYS Department of Environmental Conservation (DEC), NYS Environmental Facilities Corporation (EFC) USDA Rural Development, FEMA Region II, Local emergency services and planning departments
Hazards of Concern:	Flood, Severe Storm
Description of the Problem:	Jefferson County Fairground, located in the Black River floodplain, hosts the County fair, has outdoor concerts, minor league baseball team games, minor league hockey games, minor league football games, and acts as a local community sports hub for soccer, lacrosse, and other sporting events.
Description of the Solution:	<p>Develop and implement Fairground Flood Mitigation Program to reduce flood risk including:</p> <ul style="list-style-type: none"> • Floodproofing: Elevate or dry/wet floodproof critical structures (ticket booths, restrooms, concession stands, electrical systems). • Stormwater Management: Install bioswales, rain gardens, and underground detention systems to manage runoff. • Feasibility Study: Evaluate relocating flood-prone structures (e.g., livestock pens, electrical infrastructure). • Emergency Access: Upgrade access roads and signage for emergency response and evacuation. • Flood Response Plan: Develop a site-specific plan with training, signage, and communication protocols.
Estimated Cost:	\$3 million – \$5 million (depending on scope and infrastructure needs)
Potential Funding Sources:	FEMA HMGP, USDA Community Facilities Program, NYS Environmental Facilities Corporation (EFC), CDBG-DR, NYSDEC Resilient NY, NYS Environmental Bond Act
Implementation Timeline:	3–6 years (phased implementation with planning and design in Year 1–2)
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	<p>Reduced flood damage and recovery costs</p> <p>Enhanced public safety and emergency response</p> <p>Continued operation of a key community and economic asset</p> <p>Improved environmental sustainability through green infrastructure</p>
Impact on Socially Vulnerable Populations:	Protects a widely used public space that serves diverse community members, including low-income and rural populations.
Impact on Future Development:	Encourages resilient design and planning for future fairground improvements and adjacent development.
Impact on Critical Facilities/Lifelines:	Protects electrical systems, access roads, and public gathering spaces that serve as emergency shelters or response hubs.
Impact on Capabilities:	Improves local planning, emergency response, and flood management capabilities.
Climate Change Considerations:	Addresses increased flood frequency and intensity through adaptive design and nature-based solutions.
Mitigation Category	Structure and Infrastructure Projects; Natural Systems Protection; Planning and Capacity Building
CRS Category	430 – Higher Regulatory Standards (430), Stormwater Management (450), Flood Warning and Response (610)
Priority	High



Alternative	Action	Evaluation
	No action	-
	Use portable flood barriers (e.g., water-filled dams or modular flood walls) to protect key structures and event areas during flood threats.	Requires storage, labor, and training Not a long-term solution for chronic flooding Less effective in prolonged or severe flood events
	Move the most flood-prone structures (e.g., livestock pens, electrical systems) to elevated areas within or near the fairgrounds.	High initial cost for relocation and reconstruction May require land acquisition or reconfiguration of site layout Disruptive to fairground uses and the local economy during transition and construction phases.

Action 2025-Jefferson-16. Update Seismic Building Standards

Lead Agency	Jefferson Code Fire Prevention and Building Code Department
Supporting Agencies	Jefferson County Fire & Emergency Management, Jefferson County Planning Department, NYS Division of Homeland Security and Emergency Services (DHSES), Jefferson County Planning Department, Local Building Departments, FEMA Region II, US Geological Survey (USGS)
Hazards of Concern	Geological Hazards
Description of the Problem	There have been two earthquakes in five years, including one 3.5 magnitude earthquake in the summer of 2023 with the epicenter in the County. Building codes are not up to earthquake standards.
Description of the Solution	Conduct a seismic risk assessment and update local building codes to align with modern seismic standards. Provide training for code enforcement officers and offer incentives or grants for retrofitting critical infrastructure and vulnerable buildings.
Estimated Cost	\$1–2 million (for assessment, code updates, training, and initial retrofitting incentives)
Potential Funding Sources	FEMA HMGP, USGS Earthquake Hazards Program, CDBG-DR
Implementation Timeline	2–4 years (assessment and code updates in Year 1–2; training and retrofits in Year 3–4)
Goals Met	1, 2, 3, 4, 5, 6, 7
Benefits	Reduces risk of structural failure during earthquakes, protects lives and property, improves community resilience, and lowers long-term recovery costs
Impact on Socially Vulnerable Populations	Protects residents in older or substandard housing who may be disproportionately affected by seismic events
Impact on Future Development	Ensures new construction is resilient to seismic hazards, reducing future risk and insurance costs
Impact on Critical Facilities/Lifelines	Enhances safety and functionality of emergency services, schools, and utilities during and after seismic events
Impact on Capabilities	Builds local capacity in hazard mitigation planning, code enforcement, and emergency response



Climate Change Considerations	While earthquakes are not climate-driven, this action complements broader resilience efforts in a changing hazard landscape	
Mitigation Category	Planning and Regulatory; Structure and Infrastructure Projects	
CRS Category	Higher Regulatory Standards (430); Public Information (330)	
Priority	High	
Alternative	Action	Evaluation
	No action	-
	Launch a countywide outreach program to educate residents, schools, and businesses on earthquake safety, emergency kits, and safe building practices.	Does not address structural vulnerabilities Effectiveness depends on participation Limited long-term risk reduction without physical mitigation
	Offer small grants or tax incentives to encourage voluntary seismic retrofits of older residential buildings, especially in high-risk zones.	Participation may be limited without strong incentives Does not address public or critical infrastructure Requires administrative oversight and outreach



Action 2025-Jefferson-17. Airport Centralized Temperature Monitoring System

Lead Agency	Watertown International Airport
Supporting Agencies	Jefferson County Emergency Management, Jefferson County Facilities Department, NYS Division of Homeland Security and Emergency Services
Hazards of Concern	Extreme Temperature, Severe Winter Weather
Description of the Problem	<p>Watertown International Airport in Jefferson County, NY faces significant operational risks during periods of extreme cold due to recurring failures in the heating systems of two to three remote buildings. These failures often go undetected until substantial damage has occurred, including burst pipes and compromised plumbing infrastructure. The absence of centralized thermostat monitoring and temperature alarms means that staff are unaware when heating systems go offline, leaving critical assets exposed to freezing conditions. This vulnerability poses serious financial and operational consequences. Aircraft housed in hangars are at risk, particularly their onboard water systems, which can freeze and require repairs costing tens of thousands of dollars. In such cases, the county may be held liable for damages to customer-owned aircraft. Beyond financial implications, the airport supports sensitive operations that demand strict temperature control. These include medivac aircraft transporting vital organs and medicines, as well as scientific equipment used in research missions. A failure to maintain appropriate environmental conditions could jeopardize these missions and compromise public health and safety.</p>
Description of the Solution	<p>To mitigate these risks, the implementation of a centralized monitoring system with low/high temperature alarms is critical. Such a system would enable real-time alerts and proactive maintenance, ensuring the protection of valuable assets and the continuity of essential services.</p>
Estimated Cost	\$75,000–\$150,000 (depending on system scale and integration)
Potential Funding Sources	FEMA Hazard Mitigation Grant Program (HMGP), NYS DHSES, FAA Airport Improvement Program (AIP), Jefferson County Capital Improvement Funds
Implementation Timeline	12–18 months
Goals Met	
Benefits	<p>Prevents costly damage to aircraft and facilities, ensures continuity of medivac and research operations, reduces liability exposure</p>
Impact on Socially Vulnerable Populations	<p>Indirect benefit through protection of medivac services and public health-related missions</p>
Impact on Future Development	<p>Supports safe expansion of airport operations and facilities</p>
Impact on Critical Facilities/Lifelines	<p>Directly protects hangars, aircraft, and temperature-sensitive operations</p>
Impact on Capabilities	<p>Enhances monitoring and response capabilities for extreme weather events</p>



Climate Change Considerations	Addresses increasing frequency and severity of extreme cold events due to climate variability
Mitigation Category	Structure and Infrastructure Project (SIP)
CRS Category	Emergency Services (ES), Property Protection (PP), Preventative Measures (PR)
Priority	<input checked="" type="checkbox"/> High
Alternatives	No Action – Continued risk of undetected heating failures, ongoing liability and financial losses, potential disruption of critical operations

Action 2025-Jefferson-18. Airport Wildfire Electronic Surveillance and Detection

Lead Agency	Watertown International Airport
Supporting Agencies	Jefferson County Emergency Management, NYS Department of Environmental Conservation
Hazards of Concern	Drought, Extreme Temperatures, Wildfire
Description of the Problem	Watertown International Airport faces a growing threat from wildfires, particularly due to the presence of wooded areas and abandoned runways surrounding the facility. These zones can act as fuel sources, potentially compromising the airport's security perimeter and defense lines during dry conditions or lightning strikes.
Description of the Solution	To proactively address this risk, the airport is exploring advanced surveillance and detection strategies. One proposed solution involves installing infrared (IR) cameras atop the tallest buildings to continuously scan the surrounding landscape for thermal anomalies or hotspots that may indicate early-stage fires. This would allow for rapid identification and response before a fire can spread. Additionally, integrating electronic surveillance systems with automated notification capabilities would enhance situational awareness. These systems could detect ignition sources such as lightning strikes and immediately alert maintenance crews and emergency responders, enabling swift action to contain any fire outbreak. Protecting airport infrastructure, personnel, and critical operations from wildfire hazards is essential. By investing in modern monitoring technologies and establishing a responsive fire mitigation protocol, Watertown International Airport can significantly reduce its vulnerability and ensure operational continuity.
Estimated Cost	\$100,000–\$250,000
Potential Funding Sources	FEMA Hazard Mitigation Grant Program (HMGP), NYS DHSES, FAA Airport Improvement Program (AIP), Jefferson County Capital Improvement Funds
Implementation Timeline	12–24 months
Goals Met	



Benefits	Improved early detection and response to wildfires, protection of airport assets and personnel, reduced liability and operational disruption
Impact on Socially Vulnerable Populations	Indirect benefit through protection of emergency services and public health-related operations
Impact on Future Development	Supports safe expansion of airport facilities and infrastructure
Impact on Critical Facilities/Lifelines	Directly protects perimeter security, hangars, and emergency response infrastructure
Impact on Capabilities	Enhances surveillance, detection, and response capabilities for wildfire events
Climate Change Considerations	Addresses increased wildfire risk due to prolonged drought and extreme heat events
Mitigation Category	Structure and Infrastructure Project (SIP)
CRS Category	Preventative Measures (PR) Property Protection (PP) Emergency Services (ES)
Priority	High
Alternatives	

Action 2025-Jefferson-19. Airport Perimeter Access Road

Lead Agency	Watertown International Airport
Supporting Agencies	Jefferson County Highway Department, Jefferson County Emergency Management, NYS Department of Transportation
Hazards of Concern	Flood, Severe Storm, Severe Winter Storm, Extreme Temperatures
Description of the Problem	Watertown International Airport maintains a 7-mile gravel perimeter access road that plays a vital role in security, maintenance, and emergency response operations. However, several sections of this road are prone to flooding caused by flash storms, snowmelt, and heavy rainfall. These conditions frequently render portions of the road impassable, compromising access and delaying critical airport functions.
Description of the Solution	To address these challenges, a comprehensive upgrade is proposed that includes paving the entire perimeter road and upsizing culverts to improve drainage capacity. Paving will enhance year-round accessibility, reduce erosion, and minimize maintenance costs, while larger culverts will help manage stormwater more effectively and prevent future washouts. These improvements will strengthen the airport's infrastructure, ensure reliable access for personnel and equipment, and support long-term operational resilience in the face of increasingly unpredictable weather patterns.



Estimated Cost	\$1.5 million–\$3 million
Potential Funding Sources	FEMA Hazard Mitigation Grant Program (HMGP), NYS DOT Infrastructure Grants, Jefferson County Capital Improvement Funds
Implementation Timeline	24–36 months
Goals Met	
Benefits	Enhanced year-round access, reduced maintenance costs, improved emergency response capabilities
Impact on Socially Vulnerable Populations	Indirect benefit through improved emergency access and service continuity
Impact on Future Development	Supports safe expansion of airport facilities and operations
Impact on Critical Facilities/Lifelines	Improves access to critical airport infrastructure and emergency routes
Impact on Capabilities	Strengthens flood mitigation and operational continuity
Climate Change Considerations	Addresses increased frequency of extreme weather and flooding events
Mitigation Category	Structure and Infrastructure Project (SIP)
CRS Category	Preventative Measures (PR) Property Protection (PP) Structural Flood Control Projects (SP) Emergency Services (ES)
Priority	High
Alternatives	No Action - Continued flooding and access issues; delayed emergency response; increased maintenance costs



Table U. 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	
Action 2025-Jefferson-01.	Flood Prone Roadways	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-02.	County Road 125	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-03.	County Road 59	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-04.	County Culverts	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-05.	Structural Retrofit Program for Agricultural Buildings	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-06.	Wind-Resilient Design Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-07.	On-Farm Backup Power Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-08.	Crop Diversification and Protection Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-09.	Watershed-Based Nutrient Reduction Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-10.	Wind Monitoring and Closure Protocol System	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-11.	Ice Jam Early Warning and Response System	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-12.	Ice Jam Reduction Feasibility Study	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-13.	Bridge Scour Protection and Debris Deflection Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-14.	Coastal Erosion Mitigation Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H



County of Jefferson

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	
Action 2025-Jefferson-15. Fairground Flood Mitigation Program		1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H
Action 2025-Jefferson-16. Update Seismic Building Standards		1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	H

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